A Clinical Lecture
ON
A CASE OF SYRINGOMYELIA.

Delivered at the National Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury, on Dec. 6th, 1898,

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GENTLEMEN,—I have chosen for the subject of my lecture to-day—which I regret to say is the last I shall have the honour of giving as a member of the staff of this hospital—a case of syringomyelia in which the characteristic symptoms are particularly well exhibited. The patient, a young woman, 28 years of age, came to me as an out-patient on Oct. 5th, 1898. (For the excellent clinical notes and for the photographs which I show you I am indebted to Dr. James Collier, the senior house physician.) The patient sought advice on account of increasing weakness of both arms, especially the right, weakness of the legs, and dull pain in the back. There was no history of any nervous disease on her father's or on her mother's side. One sister had suffered from paralysis of the right arm, said to have been due to injury at the time of birth. Her father was gouty and her mother who was described as always "delicate" died in childbirth. There is no suggestion of the occurrence of syphilis in either parent. From her previous history

FIG. 1.

Photograph of patient showing narrow, bossed forehead and broad face.

there appeared to have been nothing abnormal in connexion with her birth, but during her infancy she was said to have had "concussion of the brain" through a fall. No details of this illness could be obtained from her relatives. As a child she was always considered weak and was apt to fall about. The first symptoms of the disease date back to the age of seven years (21 years ago), when she repeatedly had painless sores at the ends of her fingers, and as a result of two attacks she lost the tip of the left thumb and of the right index-finger. At the age of 10 years her back was observed to be bent and her walking became worse. At about this time she noticed that she could not feel heat and that she burned herself without knowing it and without feeling pain afterwards. Between the ages of 10 and 12 years she suffered from dull, aching pain in the dorsal region and the right hand became worse. When 12 years old her fingers began to contract. Owing to her weakness she had many falls but they did not seem to have had any direct relation to the development of the disease. The symptoms increased very gradually until five years ago, since which time the muscular weakness had become much more marked

FIG. 2.

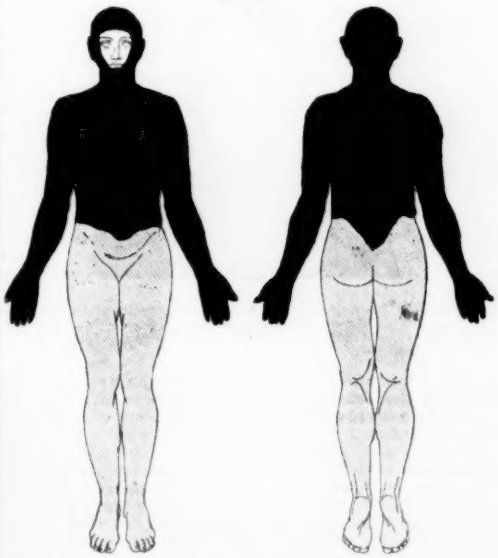


Chart showing area of analgesia. The parts printed black were entirely analgesic, the stippled parts only partially so. Painful sensation was perfect on the face.

and there had been occasional retention of urine. She had some trouble of vision since the age of 12 years, probably due to the nystagmus which will be referred to later. She appeared to have had no special difficulty with her education as she reached the fourth standard.

Her present state is as follows. She is rather short, fat, and clumsy-looking. Her forehead is narrow and bossed (Fig. 1). The lower part of her face is broad, with a prominent square lower jaw. Her expression is rather heavy and dull and is a fair index to her mental condition. As she walks into the room I may briefly direct your attention to the most striking features which her case presents. You will observe that she walks with a feeble and somewhat unsteady gait, that one shoulder is raised higher than the other owing to spinal curvature, and that her hands are wasted and deformed. You will also notice the scars of the painless whitlows already referred to and the contractures of the hands which have resulted from paralysis of the hand muscles. Beyond these objective symptoms she has loss of sensibility for painful and thermal impressions over the greater part of the body, although tactile sensibility is practically perfect everywhere. Common sensation is so little affected that she can feel the slightest touch with a camel's hair brush all over the body. She says, however, that it does not feel quite "natural" except over the face where, as we shall see, there is also no affection of the other forms of sensibility. In most forms of anæsthesia, as you are aware, painful and tactile sensation are affected together. In syringomyelia, however, we meet with what is called "dissociation" of the different forms, so that this patient has complete anæsthesia

to pain and to heat and cold over the great part of the body, although there is practically no loss of tactile sensation. If a pin is stuck sharply into the skin of her arms, for instance, although she is sensible of the contact she experiences no pain or discomfort and is quite unable to tell whether it is the head or the point of the pin which is being firmly applied to her skin. The distribution of this analgesia is shown in the accompanying charts (Fig. 2). You will see that over the whole of the hairy scalp, over the neck, the arms, and the whole of the trunk as low as the umbilicus there is complete insensibility to pain. Below that level there is great blunting of sensibility, but she can perceive a strong stimulus. There is, however, perfect sensibility to pain over a small mask-like area involving the greater part of the face. In a case of syringomyelia

FIG. 3.

Sensation from chart in a case of syringomyelia under the care of Dr. Beevor showing loss of sensation to pain over the whole of the head and neck. Sensation remains perfect over the face.

under the care of Dr. Beevor there was an exactly similar area on the face where sensation was perfect (Fig. 3). There is athermæsthesia over an even more extensive area than that of analgesia (Fig. 4). When we test her with two test tubes, one containing hot water and one containing cold water, she is quite unable to tell when they are applied to her arm which is which. This is also the case over the scalp, the neck, the trunk, and the lower limbs as low as the knees, being thus much more extensive than that in which painful sensations are abolished. Sensation is blunted below the knees, but to a much slighter extent, and once more you will observe that the face is quite sensitive to changes of temperature. Owing to this loss of sensation to pain and to temperature patients suffering from this disease are apt to burn and otherwise injure themselves without being aware of it until they actually see the result and they do not feel pain during the processes of healing. Muscular sense (including sense of position) is considerably blunted in both upper and lower limbs. If when her eyes are closed her arms are moved about she is quite uncertain of the exact position in which they are placed. This loss of sense of position is still greater in the lower limbs.

Motor symptoms.—Lower limbs.—The patient walks with an awkward and unsteady gait. She moves her legs rather stiffly but there is no great amount of spasticity so that she is able to raise her toes off the ground. There is not very much wasting of the lower limbs and the weakness is general and does not affect particular groups of muscles as in the arm. The loss of muscular sense and the incoördination point to secondary affection of the posterior columns of the cord, while the slight spasticity is probably due to some descending degeneration in the lateral pyramidal tracts. Upper limbs.—(*a*) Right. All the muscles above the elbow are weak, including the scapulo-thoracic and the humero-thoracic groups. None of them is completely paralysed, but the movement which they would produce can easily be prevented by slight resistance. In the shoulder muscles, then, as in those of the lower limbs, we have general weakness without much wasting. Below the elbow we find the characteristic paralytic symptoms and here wasting of groups of muscles is a marked feature. There is scarcely any power of flexion or of extension of the wrist and no intrinsic movements of the hand are possible. This, however, is not entirely due to paralysis, but partly to secondary contractures. (*b*) Left. There is weakness of the muscles generally, but less marked than on the right side. The hand muscles are much less affected, but there is considerable weakness, so that the patient is unable to oppose the thumb to the little finger without bending the digits. The muscles of the head and neck appear to be quite normal. There is no paralysis of any of the ocular muscles. There is well-marked nystagmus which is constant when she tries to fix her eye on any object. It is slow and usually rotatory in character.

Electrical reactions.—The electrical reactions in the muscles of the lower limbs are perfectly normal. In the upper limbs there is diminished reaction to faradaism proportional to the amount of wasting, but all, even the intrinsic muscles of the hand, respond. The galvanic reactions are also diminished in the upper limbs in proportion to the amount of the wasting, but in all the muscles the quality of the reaction is normal, K.C.C. being greater than A.C.C. Had the wasting of the forearm and hand muscles been due to peripheral neuritis of the ulnar and median nerves there would have been loss of faradaic excitability and alteration of the response to galvanism (reaction of degeneration).

Condition of the reflexes.—The deep reflexes.—The knee-jerks are greatly exaggerated on both sides and there is marked double ankle clonus. Both wrist and elbow-jerks are absent. The superficial reflexes.—The plantar reflexes are present and equal, although the response is somewhat sluggish. Dr. Collier has pointed out to me that the movement of her hallux when the plantar reflex is elicited is one of extension and not of flexion, as in a normal person, and other observations which he has made[1] confirm the statement

FIG. 4.

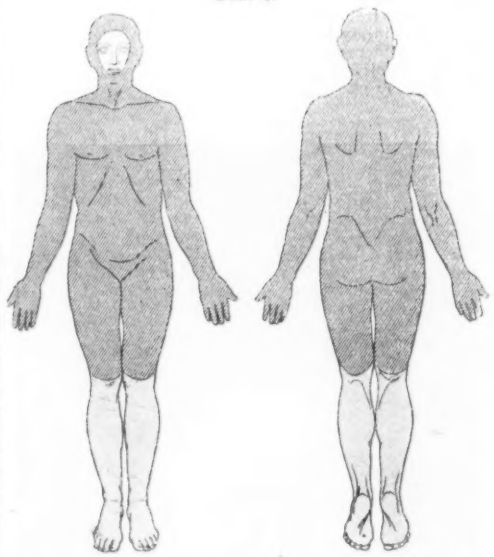


Chart showing areas in which the temperature sense was abolished or diminished. In the striped parts there was absolute loss of thermal sensation and in the stippled parts partial loss.

of Babinsky that such an alteration of the plantar reflex indicates interference with the conducting functions of the pyramidal tracts and may be of localising value in some obscure cases. The organic reflexes.—She has no trouble in swallowing nor has there been any difficulty with defecation. It has been supposed that the obstinate constipation described in many of the recorded cases was due to the spinal lesion but this is highly improbable. During the last few years from time to time she has had some difficulty in emptying her bladder, but this does not seem to have required the use of the catheter. At other times there has been deficient control so that she has had to attend precipitately to any call.

Trophic changes and deformities.—(*a*) In the skin. This patient has rather thick, clumsy fingers, but the thickening

[1] An Investigation upon the Plantar Reflex. Brain: Spring number, 1899.

is not very marked. In some recorded cases there has been a horny or cracked condition of the fingers and in others a condition of "glossy skin" similar to that met with in cases of peripheral neuritis. The nails are often rigid and brittle. (*b*) In the subcutaneous tissues—painless whitlows which occur sometimes after injury, sometimes apparently spontaneously. This patient has suffered in this way repeatedly. In two cases the mischief has spread to the phalanx which has been exfoliated. It is curious that she not only escapes the pain but also the constitutional disturbance. This is also the case with burns and even with severe injuries. I remember observing the same peculiarity in a case which I saw when I was a dresser. The patient had an accident which caused some injury to the posterior roots of the cauda equina. He recovered and was able to resume his occupation as a cabman but in a large part of his lower limbs there was complete loss of sensation to touch and pain. One day his horse stood on his foot without his observing it till he tried to move his foot. The bones were crushed and after a time portions of necrosed bone made their way out leaving him with a much deformed foot. From first to last he declared that he felt no pain whatever and that he never felt ill or experienced any loss of appetite and he continued at work without intermission. Notwithstanding the painlessness of inflammatory processes in patients suffering from syringomyelia ordinary surgical procedures have been followed by untoward consequences in several recorded cases. (*c*) In joints and tendons. In this patient there are some adhesions in the sheaths of the tendons around the wrist, so that it is not possible to overcome the contracture entirely by passive movements. There is also almost complete ankylosis of the shoulder-joint on the right side, so that the scapula and the humerus move together. In some cases there is an affection of the shoulders exactly like Charcot's joint disease in tabes. (*d*) Enlargement of all the structures of the hand. There is a cast in the museum of this hospital of the hand of a patient who was formerly in the hospital under the care of Sir William Gowers suffering from syringomyelia which shows general enlargement exactly similar to that observed in cases of acromegaly. This has also been observed in a case recorded by Holschewnikoff and Recklinghausen,[2] but no change has at present been observed in the pituitary body in any case of syringomyelia. (*e*) Curvature of the spine. In more than half the recorded cases of syringomyelia there has been well-marked spinal curvature. This patient shows this symptom particularly well and it has been present for at least 18 years. Three conditions are present—lordosis, so that there is great exaggeration of the lumbar curve to such an extent that there is a deep groove where the prominence of the lumbar spines ought to be; kyphosis, affecting the whole dorsal spine with the maximum at about the sixth spine; and scoliosis, affecting the lower half of the dorsal spine. There is considerable deviation of the spine to the left with undue prominence of the lower ribs on the right side owing to the rotation which has occurred. This deformity of the spine is therefore similar to that met with in most cases of Friedreich's ataxy. It is produced by trophic changes in the vertebræ themselves aided by contracture of some and atrophy of other spinal muscles. The curvature tends to become stationary after a time. It is usually attended by a certain amount of aching in the back, and that is the case with this patient although she has lost sensation to pain over the whole of the skin of the trunk.

Eye symptoms.—Eye symptoms have been present in many of the cases and have been attributed with much probability to dilatation of the iter or to changes in the neuroglia tissue around it. (In two cases with which I am acquainted there is laryngeal paralysis probably due to affection of the neuroglia in the floor of the fourth ventricle.) The only eye symptom in this patient is nystagmus, already referred to. In most cases narrowing of the palpebral aperture has been present and there has been inequality of the pupils. Neither symptom is shown by this patient. The fundi are perfectly normal, but her vision with test types is only $\frac{6}{18}$. This is probably due to the nystagmus. The media are perfectly clear and refraction is normal.

We have therefore not only sensory symptoms which are probably referable to the lesion in the central grey matter of the cord, but other symptoms dependent on associated cord changes—muscular atrophy from affection of the anterior horns, spastic condition with increase of the deep reflexes due to pressure on the lateral tracts, ataxy due to pressure on the ascending tracts in the posterior columns, and trophic changes due to central disturbances of the exact nature of which we are still ignorant.

The symptoms of syringomyelia are probably always due to some affection of the neuroglia around the central canal, accompanied by dilatation of the canal or by the formation of cavities in the diseased neuroglia. The cases fall into two fairly well-marked classes differentiated by Hoffmann. 1. Cases in which there is congenitally excess of neuroglia. This increases slowly during the early years of life and the symptoms develop insidiously. These cases are very chronic and such patients may live to manhood. The condition of the spinal cord in this group is spoken of as "gliosis." This excessive or hypertrophic neuroglia shows little tendency to infiltrate the surrounding parts, but it is nearly invariably accompanied by dilatation of the central canal and the increase in size of this tube causes pressure on adjacent parts and deranges other parts of the spinal cord as in our patient. There is also a tendency for softening to take place in this diseased neuroglia and for cavities to be formed in it which often open into the canal. This is less common in cases of gliosis than in cases of gliomatosis. In the patient whose case we are considering we are almost certainly dealing with gliosis. I regret that I am unable to show you specimens illustrating the condition which we should probably find if we were able to inspect the cord, but you will find a very clear and well-illustrated account of the cord in a similar case in THE LANCET of 1893[3] recorded by Dr. James Taylor. 2. Cases of "gliomatosis" in which there is tumour-like growth of the neuroglia infiltrating surrounding structures. This form comes on in adult life and is of much shorter duration. In these cases also there is early dilatation of the central canal and there is also well-marked tendency for the formation of cavities through softening in the gliomatous tissue. These may extend for long distances up and down the spinal cord, but they usually communicate with the central canal at one or more points. This is well shown in the accompanying diagram from an actual drawing of a case recorded by Asmus[4] (Fig. 5), in which the central canal is seen in longitudinal section. It is moderately dilated in the upper part, communicates lower down with other large cavities formed independently, and there are also a number of cavities in an early stage of formation which are quite at a distance from the canal.

FIG. 5.

Longitudinal section of the cord from a case of syringomyelia (after Asmus, diagrammatic). *c*, Central canal. Diagram shows multiple cavities, some of which appear to have no relation to the central canal.

[2] Virchow's Archiv, Band cxix., 1890.

[3] THE LANCET, Jan. 28th, 1893, p. 186.

[4] Bibliotheca Medica, C. Heft 1, 1893.

I also show you a series of sections from a case of syringomyelia due to gliomatosis which I prepared some years ago from the cord of a patient who was in this hospital under the care of Dr. Hughlings Jackson and Dr. James Taylor. She was a woman, about 35 years of age. All the symptoms had

FIG. 6A.

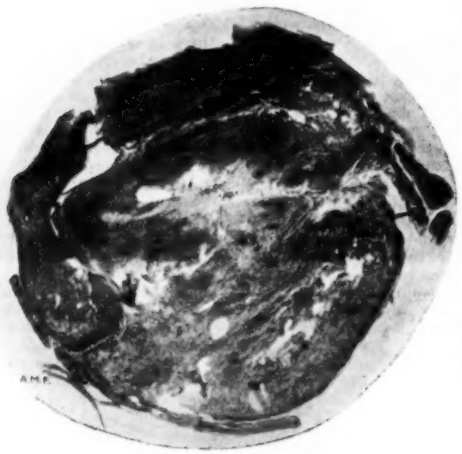


FIG. 6B.

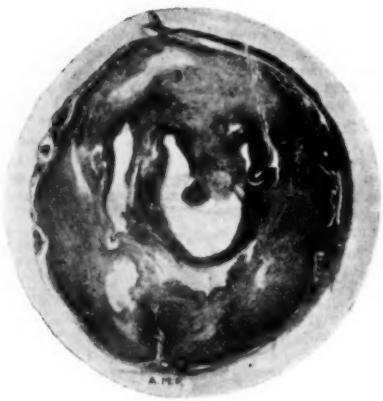


FIG. 6C.

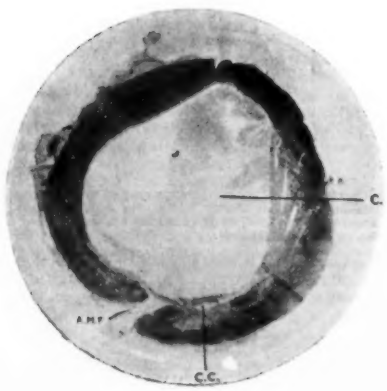
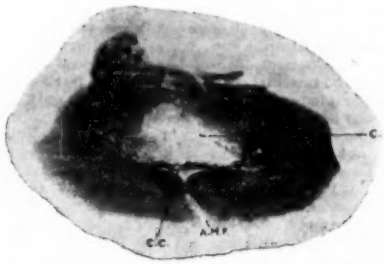


FIG. 6D.



Sections from various levels of a cord from a case of syringomyelia (gliomatosis) in a woman, aged 35 years. C, Gliomatous cavity. C.C., Central canal. A.M.F., Anterior median fissure. The new growth involved the whole of the sacro-lumbar enlargement. Note multiple cavities in this region, and that the cavities extending into the dorsal and cervical regions are independent of the central canal. × 3.

come on within five years of her death. She had a large glioma infiltrating the whole of the lumbar enlargement and there was a cavity distending the dorsal and cervical portions of the spinal cord, so that it looked and felt like an india-rubber tube and quivered when the dish on which it lay was shaken. In both the cervical and dorsal regions the centre of the cord was filled by a cavity formed in the gliomatous tissue and was quite independent of the central canal which can be seen in the sections lying at its side lined by the typical epithelium and little larger than it should be (Figs. 6A, 6B, 6C, and 6D). This cavitywas traversed by

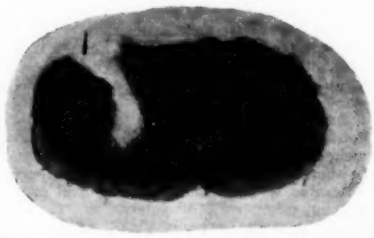
FIG. 7.

Hydromyelia from the lumbar cord of an infant with an occipital meningocele. × 3.

a definite septum in the upper dorsal region. The fluid contained in the cavity was clear brownish and a little glairy.

The term "syringomyelia" merely means the presence of a cavity in the spinal cord. There are, however, several other conditions in which there are cavities, although they are not likely to lead to confusion in diagnosis as they are

FIG. 8.



Cavity in left posterior horn, probably due to thrombotic softening, from a woman, aged 67 years, who died from hemiplegia due to thrombosis of cerebral arteries. × 3.

not accompanied by the characteristic train of sensory symptoms which we have been considering, and it may be well briefly to refer to two of them. The first is hydromyelia or congenital dilatation of the spinal canal, of which there is a specimen taken from the cord of a child who also had an occipital meningocele (Fig. 7). It does not give rise to any characteristic symptoms. The second is the formation of cavities in the cord from softening, either from inflammation or vascular obstruction (*myélite cavitaire*), and of that I show you a specimen taken from the cord of a woman, aged 67 years, who died from hemiplegia due to cerebral thrombosis. No sensory symptoms were detected during life (Fig. 8).

The diagnosis in cases where the symptoms are due to gliosis is usually easy if the sensation has been carefully investigated, because the dissociation of the different forms of temperature is pathognomonic of the condition. The atrophy of the hands, which is an early symptom, differs little from that in cases of progressive muscular atrophy from which the sensory changes at once distinguish it. Neuritis produces a deformity of the hands which closely resembles that caused by syringomyelia, but in neuritic cases common sensation is as a rule affected and electrical examination reveals the reaction of degeneration. There is one disease which causes not only atrophy through neuritis, but also causes similar trophic disturbances, and even the loss of the ends of the digits—viz., leprosy. When syringomyelia was first described it was held by many to be nothing more than leprosy—a view which is still held by some with reference to the variety which is known as Morvan's disease. The electrical reactions and the absence of dissociation of tactile and painful sensations, together with other positive evidence of leprosy, will usually make the diagnosis clear. No doubt in past years many cases of syringomyelia were unrecognised or labeled "progressive muscular atrophy." In his "Électrisation Localisée" Duchenne of Boulogne figures sections of the cord from a supposed case of this kind which is clearly one of syringomyelia, and another case regarded by Duchenne as one of progressive muscular atrophy was demonstrated upon years afterwards by Charcot as one of syringomyelia. Central hæmorrhage into the cord gives rise to symptoms closely resembling those of syringomyelia but are distinguished by the suddenness of the onset of symptoms. Central gummata are extremely rare but the possibility of their occurrence must be borne in mind. The symptoms would correspond with those of the group gliomatosis, and in all such cases a tentative anti-syphilitic course is prudent.

Prognosis.—In some cases of gliosis as exemplified by the patient before us the disease continues for many years, the severity of the symptoms fluctuating considerably from time to time, but on the whole there is a downward progress, and it is improbable that cases ever recover, the patients usually dying ultimately from some intercurrent malady. In cases of gliomatosis the symptoms develop and increase much more rapidly and terminate fatally, usually through cystitis and septic kidney trouble, in a few years.

Treatment.—No treatment by drugs or other therapeutical measures appears to have any effect on the morbid process in the cord. All that can be done is to relieve symptoms on general principles as they occur. Surgical intervention for the purpose of draining the cavity has been recommended, but it is doubtful whether it would be effectual and since it has been observed in a number of instances that operations for other purposes have been very badly borne by patients suffering from syringomyelia the risk would probably be greater than the probability of affording relief.

HOSPITALS AND GENERAL PRACTITIONERS.—A special meeting of the Council of the Charity Organisation Society will be held at the Royal United Service Institution, Whitehall, S.W., on Monday, May 8th, at 4.30 P.M., Sir James Crichton Browne, Bart., M.D. Edin., LL.D., F.R.S., in the chair. The business before the meeting is as follows: 1. Adoption of the second annual report of the general committee for the formation of a central hospital board for London. 2. Adoption of a report on general medical practitioners and hospitals. Sir William Broadbent, Bart., M.D. Lond., F.R.S., General the Right Hon. Lord Methuen, K.C.V.O., Dr. W. Knowsley Sibley, and Dr. H. Macnaughton-Jones will address the meeting.

ON SOME COMPLICATED CASES OF APPENDICITIS AND THEIR SURGICAL TREATMENT.[1]

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To expound any new facts on such a well-debated subject as appendicitis might seem almost impossible, but the cases which I bring before you this evening, even if well recognised, will, I am sure, prove of interest, not only as illustrating some of the more serious complications of the disease, but as showing how the surgeon is required to be continually on the alert and what measures he may have to adopt to get a successful result. A group of cases I wish particularly to bring before you is where the abscess in relation with the appendix is attended by suppuration later in the neighbourhood of the liver and we may first consider any factors that determine such a sequel. It would be difficult to show whether any particular position of the appendix is more liable to be attended by these complications, especially when we bear in mind how in many cases it is next to impossible to locate its exact direction. The most common site of the appendix is upwards and inwards towards the umbilicus, passing behind the inner margin of the cæcum and ileo-cæcal junction. It is conceivable that suppuration in relation with an appendix thus placed may have more chance of becoming encysted through the early matting together of the folds bounding the ileo-cæcal fossa. If the base of the appendix be the situation of the lesion or the appendix be placed in the iliac fossa or running up on the outer side of the cæcum the encysting of the pus is much more dependent on peritoneal adhesions and matted coils of bowel, as the parieto-colic folds with their ordinary development would not have much limiting influence. It is my experience that the adhesions usually are weaker towards the outer side in the direction of the ascending colon and acting on this it is my special care to very gently handle the parts in this direction. By recalling the anatomy of this region one can imagine (if there are no restraining adhesions and the peritoneum gets fouled on the outer side of the cæcum) how very easy it is for the infection to spread upwards. The recumbent position and the inclined plane on the outer side of the ascending colon leading to the space over the head of the kidney are factors of importance in the accumulation of pus beneath the liver. This intraperitoneal space in the right hypochondrium can contain a large fluid collection and is very readily shut off along its inner side from the general peritoneal cavity. In front are the under surface of the right lobe of the liver and the gall-bladder, both of which are in relation below with the hepatic flexure of the colon; above is the reflection of the peritoneum from the liver and right lateral ligament to the parietal peritoneum over the right kidney and posterior abdominal wall to its outer side; on its inner side are the foramen of Winslow and duodenum; and below is the hepatic flexure of the colon with the commencement of the space along the outer side of the ascending colon. Rutherford Morison[2] has drawn attention to this space as a seat for fluid collections after gall-bladder operations. It would be expected that a collection here might drain into the lesser sac of the peritoneum, but no doubt this is early sealed off by adhesions, and I have determined that this was so in one of my cases, and also it must be borne in mind that no mechanical overflow could take place until late owing to the depth of the fossa posteriorly below the level of the spine, the foramen of Winslow being of course anterior to the spine. The most likely extension from this space would be over the anterior and superior surfaces of the right lobe of the liver round the inferior margin of the gland or round the edge of the right lateral ligament, forming a subdiaphragmatic collection.

With these preliminary anatomical observations I will quote cases which I think illustrate these points.

CASE 1. *Gangrene of the appendix with abscess; secondary collection below the right lobe of the liver; operations;*

[1] A paper read before the Medical Society of London on April 24th, 1899.
[2] Brit. Med. Jour., vol. ii., 1894, p. 968.

recovery.—A youth, aged 18 years, was admitted into St. Thomas's Hospital on Jan. 21st, 1898, under the care of my colleague, Dr. Payne. Having previously always been well the patient had abdominal discomfort on the 19th with loss of appetite, culminating in pain generally distributed at night without nausea. There was little sleep that night but the next morning he seemed better, ate some breakfast, and went to his work; he also took some salts. During the day there were nausea, a good deal of hiccough, and loss of appetite; in the afternoon and night the pain seemed to localise itself to the right iliac fossa causing considerable tenderness. On admission he had a flushed face and furred tongue with a temperature of 102° F. The abdomen was hard and tense on the right side, especially at the lower part over the iliac fossa where there was considerable tenderness with dulness on percussion. Only the upper part of the abdomen moved during respiration and then only to a slight extent. The abdominal muscles on the right side were contracted so that the last rib and iliac crest were approximated; on palpation a well-marked mass could be detected with special tenderness over McBurney's point. The patient said that on arriving at the hospital he noticed the pain, which had been before in the iliac fossa, shoot up his right side; this lasted for some time and then left an aching pain which soon, however, disappeared. The liver dulness was normal and there was nothing to be detected in the chest. On the 22nd the temperature was 100·4°, but the pain was less; there had been constipation for three days. In the afternoon an operation was performed and a collection of pus was found behind the cæcum surrounding the appendix which was directed upwards towards the umbilicus. The appendix was so firmly adherent at its distal end as not to permit of its separation with safety; its central part, which could be easily freed, was gangrenous on one side. As the whole appendix could not be removed the gangrenous part was incised and a small drainage-tube was inserted and lightly packed round with gauze. The temperature after the operation dropped to normal, but after a few hours began to rise again and he was troubled with slight cough. On the morning of the 24th the temperature was 101·4°, the respirations were 34, and the pulse was 127. The cough was still troublesome and there was some purulent expectoration. The right side of the chest was dull in front from the fourth rib downwards and from the inferior angle of the scapula behind; over this dull area the breath sounds were diminished and the voice sounds were ægophonic. He was again examined and it was found that a track ran upwards from the wound to the dull area along the ascending colon. An incision was then made just below the costal margin on the right side about four inches long dividing the outer part of the rectus. Thin, purulent, offensive fluid was found occupying a space bounded by the inferior surface of the liver, the front of the kidney, the hepatic flexure of the colon and the duodenum and matted gastro-hepatic omentum on the left. Into this space the probe could be passed up along the ascending colon. There was some fibrinous deposit about the inferior border of the liver creeping round on to the anterior surface. Two tubes were then inserted, one draining the space through the loin and the other tube passing down in the line of the colon to the lower wound. The next morning (the 25th) the temperature was 99°, the pulse was 102, and the respirations were 32. There was no pain except on coughing and then only in the wound. Through the day and night the temperature rose again, reaching 101·4° at 8 A.M. on the 26th. His general condition was extremely precarious as he was cyanosed, with bubbling crepitations over both lungs, and the discharge from the wounds was extremely offensive. Fortunately he rallied, the temperature going down during the day, reaching 98° at midnight and then remained below 100°. The lungs gradually cleared of moist sounds but on the 28th there was some impairment of the percussion note with slight friction in the left post-axillary line at the level of the eleventh and twelfth dorsal spines. These disappeared during the next day or two and his further progress was almost uneventful except for a little anxiety owing to the temperature going up on Feb. 7th and remaining so until the 13th when it finally became normal. This rise was associated with signs of consolidation at the right base. Both drainage tubes were removed on the 11th, but the wounds were a long time closing, the top one being healed on March 17th and the lower one shortly afterwards.

CASE 2. *Appendicitis with abscess; secondary collection below the right lobe of the liver; operations; recovery.*—A child, aged eight years, was admitted into the East London Hospital for Children, Shadwell, under the care of Dr. Donkin, on August 5th, 1898. There was no history of any previous attack. Four days before admission the illness started with vomiting, drowsiness, and fever, and the next day pain was complained of in the right iliac region. All the next day she had the pain and at night the mother gave her castor oil, when she vomited for the second time. On the afternoon of the fourth day she was admitted into the hospital. The bowels had not acted since the commencement of the illness and nothing but milk had been taken. On admission the abdomen hardly moved during respiration and the right hip was flexed. There was very great tenderness and a lump could be felt in the right iliac fossa. Per rectum no lump could be felt bulging from the right side. The temperature was 101° F. and the pulse was 108. At midnight the temperature was 102°, but during the 6th it dropped to 99·4°, rising at night to 100·8°. On the 7th the patient seemed decidedly better, the temperature being lower, but on the 8th after rising to 100·6° it fell to normal at midday only to rise again to its original level. The dull area had extended more into the loin and indefinite fluctuation was obtained. On the 9th the temperature having continued to rise to 102° I was asked to see her and as there was undoubtedly pus present immediate operation was advised. The usual skin incision was made and the layers of the abdominal wall were split. On incising the peritoneum a pus cavity was opened which extended up behind the inner side of the cæcum and ileo-cæcal valve in the line of the normal direction of the appendix. The appendix was embedded in adhesions and no lesion was found in it. The cavity was firmly walled in by adhesions below, but on the outer aspect of the cæcum they were very delicate. The pus was most offensive. A rubber tube was inserted into the cavity and iodoform gauze was lightly packed around it. The temperature was 96° after the operation and rose again to 100°, gradually coming to normal during the next 24 hours. At midday on the 14th after everything had proceeded satisfactorily the temperature went up to 101° and remained so with only slight remission up to the afternoon of the 16th when the second exploration was made. On examination on the 16th there was well-defined fulness on the right side of the abdomen below the costal arch and also in the right loin. There was noticed approximation of the last rib and the iliac crest. With respiration there was very little movement on the right side. Dulness extended up from the wound to the costal margin and into the right loin and a fluid thrill could be elicited from front to back. The upper margin of the liver dulness was in the fifth space in the nipple line. From the first wound the discharge was now much thinner and less offensive. As it seemed clear that there was a second collection of pus an incision was made just below and parallel to the costal margin from the linea semilunaris into the right loin. An intraperitoneal pus collection of almost half a pint was opened. This space had for its boundaries the under surface of the liver above, the foramen of Winslow and the duodenum on the inner side, the hepatic flexure of the colon below, and it was completely shut off from the previous collection. There was no extension in front over the anterior surface of the liver. The cavity was washed out with boric lotion and a gauze drain was inserted. The after-effect on the temperature was excellent as it was normal except for a very temporary rise to 100° on the 21st. On the 19th she had jaundice which perhaps was not surprising considering that the common duct was in the inner wall of the cavity, but this soon disappeared. There is nothing to detail about the further progress of the case. The lower wound was healed at the end of the month but the upper one was not sound until the middle of September, when she went away to the convalescent home.

The above two cases are very much of the same type, each of them having, secondary to the primary lesion, a well-defined collection under the right lobe of the liver and limited to that region. In Case 1 the physical signs in both lungs after the operation did not appear to have any relation to the inflammation about the liver. From the extension of the liver dulness upwards it was a question before the secondary operation whether the organ was simply pushed up or whether there was as well pleural effusion on this side or a subdiaphragmatic collection. After the operation this upward extension soon disappeared, so it seemed proved that the organ had only been displaced upwards.

CASE 3. *Appendicitis with abscess in the pelvis; secondary inflammation about the liver; subdiaphragmatic abscess (?); right empyema; parotid bubo; operations; recovery.*—A boy, aged 16 years, was admitted into St. Thomas's Hospital under the care of Dr. Payne on March 15th, 1898. Up to the present illness he had always enjoyed good health. About four weeks before admission he complained of abdominal pain; a fortnight later he had severe vomiting and took to his bed. He was admitted into the hospital with a rigid abdomen, more especially in its lower part, the condition simulating an over-distended bladder. On drawing off the urine no difference was produced in the size of the swelling. Rectal examination proved the existence of fluid in Douglas's pouch. The temperature was 102° F., the pulse was 100, and the respirations were 28. In the evening his abdomen was explored by a lateral incision as his symptoms pointed to appendix trouble. The muscular layers were split, not cut, and the peritoneum was opened. Here it was found that matted bowel roofed in the fluid collection and to get at the latter the coils were gently separated and about one pint of pus with some fæcal matter was set free. The appendix was not found. A glass tube was put into the pelvis and a gauze drain into the upper part of the wound. His progress for a week was fairly satisfactory and then his temperature began to go up, reaching from 102° to 103°. On March 22nd two small rubber tubes were substituted for the previous drains as the discharge had considerably lessened. On the 23rd he was noticed to be developing a parotid bubo on the left side which remained for some time without showing any signs of softening, but eventually an abscess formed and it was opened on April 6th. A large piece of necrosed tissue, apparently lymph, came away on the 2nd from the abdominal wound followed by a considerable quantity of foul-smelling pus. There was marked diminution in the extent of the dull area and of abdominal tenderness. On the 7th he had severe pain on the left side below the cardiac area and friction could be heard along the line of the seventh rib into the axilla. There was some dulness behind from the angle of the scapula downwards. On the 8th he complained of pain in the abdomen and on coughing brought up several ounces of thin muco-purulent sputum with very offensive odour. On examination on the 9th the abdomen was not painful or tender and moved fairly well and equally on respiration. The impaired resonance remained the same on the left side without evidence of fluid collecting. The parotid bubo had discharged freely and the temperature had gone down. There was complaint of pain in the right shoulder. The temperature came down to normal on the 11th, but the lung-signs on the left side remained; if anything, the breath-sounds were less marked. On the 13th the temperature went up again to 102·8° and the next morning there were signs of fluid in the right pleura with friction in the axilla and diminished breath and voice sounds at the base in front and behind. The liver dulness began at the fifth rib in the nipple line and at the sixth in the mid-axilla. The upper part of the abdomen was explored on the 16th by an incision parallel with the right costal margin starting from the linea semilunaris. Dense adhesions were found on the upper and under surfaces of the liver, but no pus was discovered. A hypodermic needle was passed into the pleura and a negative result was obtained. On the 27th the physical signs at both bases continued as before except that now there was no friction on the right side. He was cheerful, had no pain, slept well and took his food readily, but the temperature was still irregular. On May 6th there was some return of abdominal pain, but no lesion was detected to explain this. The parotid wound had almost healed. The upper abdominal wound had closed but the lower one still discharged. On the 16th the physical signs in the lungs were the same, but the persistence of the nightly rise of temperature strongly suggested pus. It was determined to explore the right chest again on the 25th as some œdema was noticed over the lower spaces laterally. An incision was made over the right tenth rib in the posterior part of the axillary line and about two inches of bone were removed. On opening the pleura very foul pus was evacuated from a localised cavity apparently pleural; this was washed out with boric acid and as there was considerable hæmorrhage the space had to be plugged with cyanide gauze for some hours. After the operation the temperature fell to 96·4° and then rose again to just over the normal line. At this period the patient was in a terribly emaciated state, weighing only 4 st. 6 lb. From this time on he rapidly improved, his temperature remaining normal excepting for a sudden unexplained rise to 103·6° on June 3rd. He took his food well and gained flesh reaching 5 st. at the end of the month, by which time his wound had healed. He was discharged from the hospital on July 10th.

The appendix abscess in this case appears to have gradually collected in the pelvis and to have been roofed in by matted small intestine. As to the position of the appendix I cannot say for certain, but there is a strong probability that its direction was downwards and inwards towards the pelvis and possibly overhanging the pelvic brim. As in the former cases, there was spreading of peritoneal infection along the colon to the liver as was shown by the extensive adhesions on exploration. There was no actual proof of any subdiaphragmatic collection, but the lung signs terminating in the basal empyema on the right side gave some colouring to this belief. The association of the parotid bubo may be noted as it has been so frequently in relation with peritoneal inflammation especially when in the pelvis.

The next case is one of a different type and of considerable interest from the subacute nature of the symptoms and from the local conditions found on exploration.

CASE 4. *Appendicitis; secondary abscess below the costal margin superficially placed; fæcal fistula; recovery.*—A boy, aged 12 years, was admitted into St. Thomas's Hospital under the care of my colleague, Dr. Payne, on April 13th, 1898. He had always had good health and so this seemed undoubtedly his first attack. On April 7th he was seized with severe pain in the abdomen and the next day he commenced to vomit which continued up to the date of admission. During these days practically no nourishment was taken. The bowels were last opened on April 6th. On admission he was found to be well nourished but pale. The abdomen was rather distended and did not move well on respiration. It was resonant all over except in the right iliac fossa where a distinct tumour could be felt. Over this area it was extremely tender, especially over McBurney's point. The rest of the abdomen was not tender on palpation, the liver dulness was normal, and the spleen was not felt. His temperature was normal and the pulse was 90. During the next few days there was gradual loss of tenderness with reduction in size of the inflammatory mass. He vomited once or twice but was able to take fluid nourishment. His bowels were opened naturally on the 18th. His temperature reached 100° F. on the three successive evenings of the 14th, 15th, and 16th, but was otherwise normal. On the evening of the 22nd after having a more substantial diet he had a severe attack of vomiting. On examination a hard lump of about the size of a walnut could be felt at the outer edge of the right rectus about one inch below the costal margin; this seemed in the abdominal wall; it did not move with respiration and was tender on pressure. Nothing could now be felt in the iliac fossa, but there was a cord-like induration starting at about the lower quarter of the rectus running upwards along its outer margin to the lump above. On the 25th I operated, making an incision over the upper lump parallel to the costal margin; beneath the transversalis a little pocket of very fœtid pus was opened. An incision was then made below over McBurney's point and the lower end of the cord-like thickening was exposed and again a little pus was set free. A probe was passed into the lower end of what proved to be a sinus lined with soft granulations which led up to the small abscess. Downwards the probe went towards the pelvis and this track was opened up by dividing some of the outer fibres of the rectus and the deep epigastric artery. No more pus was discovered. The probe could be easily felt in the pelvis per rectum in relation with its right wall, but it was difficult from this site and from what was found in the wound to say whether the granulation track was in the subperitoneal layer or among peritoneal adhesions. No bowel was displayed. A drainage tube was put in the lower track and a gauze drain in the upper one; the wound was partially sutured. His condition after this for some days was satisfactory, but then his temperature began to go up at night, reaching its maximum (102·2°) on the 7th, on which day there was a fæcal discharge from the wound and after that a gradual reduction in temperature. On the 14th the lower sinus was again explored when at the bottom an opening was found in the bowel admitting the tip of the finger; all round the opening was granulation tissue and it was difficult to say whether the bowel so perforated was the

base of a dilated appendix or the cæcum, but I thought the latter. From the rotten state of the bowel wall it was impossible to close the opening without doing an extensive operation and so it was not attempted. His upper wounds soon healed and the fæcal fistula gradually contracted but yet allowed considerable discharge when he went to the convalescent home on July 1st. He came into the hospital again in December, his fistula having contracted up to a very small opening; as there was only a slight fæcal discharge which could be easily controlled I determined to wait events knowing how unsatisfactory attempts to close these fistulæ are. Since then I have seen nothing more of him.

The main feature of interest in this case was the possible unusual sequence of events after the primary lesion. On exploration it was extremely difficult to say whether the pus collection outside the margin of the rectus was in the subperitoneal tissue or in the peritoneal cavity. If in the subperitoneal tissue it must be assumed that the peritoneum had become adherent about the base of the appendix or cæcum and then given way, leading to the gradual travelling up of the pus towards the costal margin. If the lesion was intraperitoneal we have the same course of events as in the previous cases, only on a smaller and less active scale. The infection spread up on the anterior surface or outer margin of the colon, the latter becoming adherent to the abdominal wall. Now an apparent difficulty, the abscess just below the costal margin, is not so, for if the lower edge of the liver were adherent to the colon and both of them to the parietal peritoneum at the costal margin the pus might easily make its way forwards. The ease with which the probe in the bottom of the wound could be felt per rectum also gives some support to the intraperitoneal site, for it would pass among adhesions into Douglas's pouch, not an uncommon direction for pus to take, whereas if this track had been in the subperitoneal tissue the probe would have seemed more distant.

To summarise, the following points may be deduced from this paper: (1) in a small proportion of cases of appendicitis with abscess there is intraperitoneal extension to the liver region; (2) in relation with the liver pus may be only below it or also above it "subdiaphragmatic"; and (3) clinically there is considerable difficulty in determining when the apparent upper border of the liver is raised, how much of this is due to simple displacement upwards by a fluid collection or to a subdiaphragmatic abscess or to an associated lesion at the lung bases.

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THE SERUM TREATMENT OF PLAGUE.

BY FRANK G. CLEMOW, M.D. EDIN., D.P.H. CANTAB.

WHILE the use of an organic fluid obtained directly or indirectly from the bacillus of plague has already led to most successful and even brilliant results as a prophylactic in this disease, it must be regretfully admitted that the trials made of similar fluids as curatives have hitherto met only with failure or with the most partial success.

Careful experiments have now been made with, so far as I am aware, four different fluids of this kind in the treatment of plague. They are associated with the names of the following observers: M. Haffkine, M. Yersin, Professor Lustig, and M. Roux. That associated with the name of M. Haffkine is now being widely and successfully employed in India as a prophylactic, but it was originally investigated as a curative agent. It will be remembered that the conclusion which was come to as to its value in this respect was that it possessed no curative powers and that its effect, if anything, was rather detrimental than otherwise. It was consequently abandoned almost immediately as a curative agent and I am not aware that any further attempt has been made to search for a cure among fluids prepared in this or in a similar manner. M. Haffkine's fluid, it is almost superfluous to state, is a pure growth of the plague bacillus in which the organisms themselves have been killed by raising the growth to a temperature of 58°C. for one hour. It contains the dead bodies of the killed bacilli and the chemical products of their growth which are apparently (so far, at least, as their prophylactic powers are concerned) uninjured by the exposure to this temperature. The other three "curative" agents are all derived from the blood serum of a horse which has been modified by repeated injections into the veins of the animal of a culture of plague bacilli.

The first serum of this kind to be experimented with was one prepared by M. Yersin in 1896 and the results of its administration in a few cases of plague in Amoy led, it will be remembered, to very sanguine hopes as to its future.[1] Unfortunately these hopes were not borne out by further trials in Bombay and elsewhere and my own experience, which is given in detail below, has led me to the conclusion that this serum even in comparatively large doses is entirely without effect upon the symptoms of plague.

A second serum is that prepared by Professor Lustig of Florence. Experiments prolonged over two years have now been made with this serum in Bombay, partly by Professor Lustig himself and partly by his assistants Dr. Galeotti and Dr. Polverini. It has been claimed for this serum that it reduces the case-mortality of plague from 66 per cent. to 40 per cent.[2]

The third serum is that prepared by M. Roux in the Pasteur Institute. The most extensive trial of this serum has been made by M. Simond who has charge of the French colonial bacteriological station at Saigon and who recently visited India. M. Simond's results have not, so far as I am aware, yet been published, but he informed me when in Calcutta last September that he had obtained very promising results with the serum, the mortality being reduced by about one-half.

Of these serums and their effect in the treatment of plague I have had personal experience of two only—M. Yersin's and Professor Lustig's. The number of cases which I have seen treated by the latter is perhaps too small to base a final conclusion on their results, but in the case of the former I have been in a position to observe and to take part in a carefully conducted trial in which 50 cases were submitted to this form of treatment and 50 alternate cases noted as controls, and the results of this trial have enabled me to form a very definite, though unfortunately unfavourable, opinion as to the value of this particular serum.

50 CASES OF PLAGUE TREATED WITH M. YERSIN'S SERUM.

During the months of March and April of last year 50 patients suffering from plague were submitted to the serum treatment in the wards of the old Government House Hospital, of which I was then in charge. The serum in question was prepared in the Imperial Institute of Experimental Medicine in St. Petersburg and was brought to India by the Russian Plague Commission, of which Dr. Yassenski was the principal member. The injections were for the greater part administered by Dr. Yassenski.

Mode of preparation of the serum.—A peptone-agar culture of the plague bacillus, prepared under special precautions to obtain an even growth, is rubbed up after 24 hours' growth with four or five cubic centimetres of a 0·5 per cent. solution of salt. A smooth emulsion should result. This is exposed in a water bath to a temperature of 58° C. for one hour. The emulsion is injected into the veins of a horse and reaction usually follows. The degree of reaction varies very considerably in different horses. A second injection is given 10 days after complete cessation of the reaction from the first. The serum obtained from the horse's blood is tested before use upon white mice, 20 grammes in weight. The serum is diluted with 0·5 per cent. salt solution and one mouse receives one-fifth of a cubic centimetre, a second one-tenth, and a third one-twentieth. Twelve hours later each of these mice and a control one receive an injection of plague virus sufficient to kill the control mouse in two days. If the mouse which received one-tenth of a cubic centimetre of the serum remains alive the serum is fit for use on human beings. Before storing the serum is diluted with 0·5 per cent. of carbolic acid.

Mode of storage and transport.—The serum is stored in small glass flasks drawn out to a long neck. Each flask holds 10 cubic centimetres of the serum. The neck is sealed in the blow-flame and no cork or sealing-wax is required. The method appears to me to be preferable to any that I have yet seen for storing organic fluids. The serum prepared in the Pasteur Institute in Paris is put up in small bottles closed with corks and sealing wax, and a similar method is employed for the storage of M. Haffkine's prophylactic. The latter has the still further disadvantage that the fluid is

[1] Annales de l'Institut Pasteur, January, 1897, pp. 81–93.
[2] THE LANCET, Nov. 26th, 1898.

put up in quantities sufficient for 30 or 40 persons, and consequently if only one or two persons are to be inoculated the greater part of the contents of a bottle may be wasted. If not wasted and if the bottle be re-corked for subsequent use a considerable risk is run of admitting extraneous organisms to the fluid. At the best the use of corks and sealing-wax greatly increases the difficulty of ensuring absolute sterility. The flasks used for the Russian serum are approximately two and a half inches in height, including the elongated neck which is about half that length. An assistant prepares them for the inoculator's use by filing the neck near its junction with the body of the flask. A rapidly made and superficial mark with the file is sufficient to enable the inoculator to break off the neck at the moment he requires to use the serum. The fluid, moreover, being already in measured doses of 10 cubic centimetres each, he has no need to measure the quantity taken up in the syringe if a multiple of 10 is (as is most frequently the case) the quantity to be injected. The flasks are packed each in a separate little box made of thin bits of wood tightly nailed together and lined with cotton wool. No instrument is required to open the boxes; the fingers suffice to open one end. These boxes or wooden envelopes can be subjected to comparatively rough usage with little fear of injury to the flask inside. When giving evidence recently before the Indian Plague Commission, to whom I submitted a description and sketch of one of these flasks, I was asked by Professor Wright of Netley whether they would not be appropriate for the storing of calf lymph. The suggestion appeared to me to be an excellent one. Where it is required to store calf lymph in any quantity it would, I think, be difficult to find a better method or a form of vessel more admirably adapted to the purpose.

The mode of administration and dosage.—The cases for inoculation were not selected in any way. Every alternate case of true plague admitted to the hospital, provided the diagnosis was certain and the patient not absolutely moribund, was submitted to the treatment. The other alternate cases were noted as control cases. At first 20 cubic centimetres of the serum were injected in the flank once daily. After the first three or four cases a second dose of 10 cubic centimetres was given in addition in the evening. Later these doses were increased to 30, and even 40, cubic centimetres in the morning and 20 cubic centimetres at night. The highest doses were therefore 60 cubic centimetres in a day. The treatment was continued for periods varying from one day to 10 days. The injected patients received in addition the ordinary medicinal and other treatment to which the control patients were submitted. The 50 patients received in all 5820 cubic centimetres of serum, or rather over 116 cubic centimetres per head. Those who recovered received an average of 175 cubic centimetres each and those who died nearly 102 cubic centimetres. This difference was due solely to the fact that the treatment could be continued longer in those who recovered than in those who died.

Clinical effects of the serum.—In no case was there any local reaction at the seat of injection. The fluid was rapidly absorbed in every instance. The injections gave rise to no characteristic symptoms and they appeared to have no perceptible effect upon the symptoms of the disease. In a few instances a fall of temperature followed the injections, but as such falls of temperature are far from uncommon in plague without any special form of treatment they cannot in these cases be ascribed with any degree of certainty to the injections. Other symptoms appeared to be equally unaffected by them. Albuminuria was present in 21 cases, of which 18 proved fatal. It was not in any way affected by the injections. Delirium was present in 28 cases and other nervous symptoms, such as drowsiness, thick and halting speech, coma, &c., in almost every case. These symptoms were also unaffected by the injections. Vomiting was a symptom in six cases and in two it was very severe and almost uncontrollable; it did not appear to be either checked or increased by the injections. Hiccough occurred in two cases, both fatal, and general convulsions in two other cases, also fatal. The spasm did not appear to be brought on by the injections and in one instance convulsions had developed before the injections were begun. Secondary pneumonia occurred in two fatal cases and a small pneumonic patch developed in a third which resulted in recovery. Diarrhœa occurred in six fatal cases and in one in which the patient recovered. No connexion could be traced between this symptom and the injections. With regard to the effect on the buboes, suppuration occurred in seven out of the 10 cases which recovered and in none of those which ended in death. The percentage of suppuration in non-fatal cases was therefore 70. On the other hand, out of a total of 502 cases admitted to the Parel Hospital during the period in which I had charge of it 85 cases with buboes recovered and in 52 of these suppuration occurred—that is to say that in 61 per cent. of a large number of non-fatal cases the bubo suppurated. Suppuration was therefore slightly more common in the inoculated cases than in others, but the figures appear to me to be too small for much weight to attach to them.

Results and mortality.—The mortality in each group of 50 cases, inoculated and control, was exactly the same. In each group 40 patients died and 10 recovered. The mortality in each group was consequently 80 per cent. Death occurred within the first period of 24 hours after commencing the treatment in seven cases, within the second in 15 cases, within the third in 10 cases, within the fourth in one case, within the fifth in three cases, within the sixth in one case, within the ninth in one case, within the tenth in one case, and within the eleventh in one case. I endeavoured to determine whether more favourable results might be anticipated from the treatment if the injections were begun quite early in the disease. Unfortunately it is often difficult to obtain trustworthy information upon the previous duration of illness in the case of native plague patients. The figures in the following table are consequently only approximate, but it cannot pass without note that in the six cases in which the treatment was begun on the first day of the disease the history appeared to be fairly reliable, the hour of onset being definitely ascertainable in some. Of these six cases, however, all, without exception, proved fatal.

TABLE I.—*Showing the Results of the Treatment according to the Period of the Illness at which it commenced.*

First injection given on—	No. of cases.	No. of deaths.	Percentage of mortality.
First day of illness	6	6	100·0
Second ,, ...	13	9	69·2
Third ,, ,, ...	10	8	80·0
Fourth ,, ,, ...	7	6	85·7
Fifth ,, ,, ...	6	6	100·0
Sixth ,, ,, ...	1	1	100·0
Seventh ,, ,, ...	2	1	50·0
Eighth ,, ,, ...	1	—	—
Tenth ,, ,, ...	1	—	—
Unknown...	3	3	100·0

It is all too obvious from this table that the period of the illness at which the treatment began had no influence whatever upon the results.

Age and sex of the patients.—40 of the patients were males and 10 were females. Of the males eight died and of the females two. The mortality in either sex was therefore the same—20 per cent. The great majority of the patients were between the ages of 20 and 40 years. The youngest was a child, aged seven and a half years; she had a right cervical bubo which suppurated; the treatment began on the tenth day of the disease and the child recovered (Case 38). Two children of the age of nine years were submitted to the treatment. Of these, one, a male with left axillary bubo, died on the second day after commencing the injections, although these had been begun on the first day of the disease (Case 11). The other, a girl with right femoral bubo in whom the treatment began on the second day of the disease, recovered (Case 19). Two patients over 60 years of age were submitted to the treatment. One, a Hindu female, aged 65 years, had a left femoral bubo; treatment began on the second day of the disease and death occurred two days later (Case 4). The other was a Parsee male, aged 67 years; he had a right femoral bubo, and delirium, diarrhœa, and albuminuria were present. Treatment in this case began on the third day of the disease and death occurred from erysipelas five days later. The erysipelas was not in any way the result of the injections; it began round a furuncle which developed close to the umbilicus and at some distance from the site of the injections (Case 33).

Complications.—Urticaria developed in one case in which the patient recovered (Case 8). The patient, a male

TABLE II.—DETAILS OF 50 CASES OF PLAGUE TREATED WITH YERSIN'S SERUM.

No.	Sex.	Religion.	Years of age.	Day of the disease upon which the treatment began.	Result.	Number of days after beginning the treatment when death occurred.	Total number of cubic centimetres injected.	Remarks.
1	Male	Hindu	21	5th	Died	11th	100	Right inguinal bubo and, later, right cervical bubo; severe vomiting and hiccough; double panophthalmitis; delirium; albuminuria; hæmorrhage from the gums.
2	Male	Hindu	22	2nd	Recovered	—	160	Right inguinal bubo which suppurated; delirium; pulse intermittent.
3	Male	Christian	21	1st	Died	3rd	40	Left femoral bubo; delirium; hiccough.
4	Female	Hindu	65	2nd	Died	2nd	40	Left femoral bubo; delirium.
5	Male	Christian	30	5th	Died	3rd	60	Right inguinal bubo; delirium.
6	Male	Hindu	25	Unknown	Died	3rd	60	Right axillary bubo; enlarged spleen; rhonchi in both lungs and much sputum; dicrotic pulse.
7	Male	Christian	32	3rd	Died	5th	90	Right inguinal bubo; left ptosis; left facial spasms; delirium.
8	Male	Christian	19	2nd	Recovered	—	290	Right femoral bubo which suppurated; urticaria; furuncle of the right foot.
9	Female	Hindu	12	6th	Died	1st	20	Right inguinal bubo; general convulsions and opisthotonos.
10	Male	Hindu	22	2nd	Died	2nd	80	Left inguinal bubo; delirium; vomiting.
11	Male	Hindu	9	1st	Died	2nd	50	Left axillary bubo; delirium.
12	Male	Hindu	25	2nd	Died	3rd	80	Right cervical and right inguinal buboes; enlarged spleen; delirium.
13	Male	Christian	23	2nd	Died	15th	340	Left axillary bubo and, later, one in the left groin; vomiting.
14	Female	Hindu	19	1st	Died	6th	150	Left inguinal and femoral bubo; delirium; secondary pneumonia, left base.
15	Female	Hindu	35	4th	Died	2nd	60	Left inguinal bubo; delirium; secondary pneumonia, left base.
16	Female	Mahomedan	12	1st	Died	1st	30	Right inguinal bubo; convulsive movements of both hands.
17	Female	Hindu	20	7th	Died	3rd	110	Left cervical bubo; delirium.
18	Female	Hindu	30	5th	Died	2nd	60	Right parotid bubo; rhonchi in both lungs.
19	Female	Hindu	9	2nd	Recovered	—	60	Right femoral bubo which suppurated; vomiting; rhonchi in both lungs.
20	Male	Christian	40	2nd	Died	2nd	90	Left inguinal bubo.
21	Male	Hindu	18	1st	Died	1st	30	Left femoral bubo; vomiting.
22	Male	Christian	45	4th	Recovered	—	160	Left inguinal bubo which partially suppurated.
23	Male	Hindu	20	2nd	Recovered	—	340	Left inguinal bubo which suppurated and smaller bubo in right groin (malarial subject); albuminuria.
24	Male	Christian	25	3rd	Died	2nd	80	Right femoral bubo; delirium.
25	Male	Hindu	14	8th	Recovered	—	200	Right femoral bubo which suppurated and sloughed; three necrosed patches of skin on the right thigh and two furuncles on the right shin; diarrhœa; carbolic staining of the urine; rhonchi in both lungs; small patch of pneumonia at the right base.
26	Male	Hindu	30	4th	Died	9th	220	Left inguinal bubo; delirium; diarrhœa; erysipelas.
27	Male	Hindu	25	4th	Died	1st	40	Right inguinal bubo; albuminuria; delirium.
28	Male	Christian	25	2nd	Died	2nd	80	Left femoral bubo; albuminuria; delirium.
29	Male	Hindu	16	Unknown	Died	2nd	120	Left inguinal bubo; delirium; rhonchi in both lungs.
30	Male	Hindu	27	3rd	Recovered	—	140	Right axillary bubo which did not suppurate.
31	Male	Mahomedan	25	3rd	Died	1st	60	Left inguinal bubo; delirium; albuminuria.
32	Male	Hindu	19	3rd	Died	3rd	180	Right inguinal bubo; delirium; albuminuria.
33	Male	Parsee	67	3rd	Died	5th	250	Right femoral bubo; delirium; albuminuria; erysipelas; diarrhœa.
34	Male	Hindu	23	4th	Died	2nd	100	Left femoral bubo; albuminuria; enlarged spleen; delirium.
35	Male	Hindu	50	4th	Died	3rd	100	Left supra-trochlear bubo; delirium; albuminuria.
36	Male	Mahomedan	35	3rd	Recovered	—	140	Left femoral bubo which did not suppurate (malarial subject); enlarged spleen; albuminuria; acute cystitis.
37	Male	Hindu	22	5th	Died	2nd	100	Left inguinal bubo.
38	Female	Hindu	7½	10th	Recovered	—	20	Right cervical bubo which suppurated; vomiting.
39	Male	Hindu	25	2nd	Died	2nd	100	Right inguinal bubo.
40	Male	Mahomedan	22	7th	Recovered	—	240	Right femoral bubo which did not suppurate; delirium; albuminuria.
41	Male	Hindu	12	2nd	Died	2nd	60	Left axillary bubo; delirium; albuminuria; diarrhœa.
42	Male	Christian	30	2nd	Died	1st	40	Left inguinal bubo; albuminuria; diarrhœa.
43	Male	Hindu	21	3rd	Died	3rd	120	Right inguinal bubo; delirium; albuminuria.
44	Male	Hindu	28	1st	Died	3rd	60	Left inguinal bubo; albuminuria.
45	Male	Hindu	28	5th	Died	5th	300	Right femoral bubo; albuminuria.
46	Male	Hindu	23	5th	Died	2nd	120	Left axillary bubo; delirium; albuminuria.
47	Male	Hindu	33	3rd	Died	1st	60	Left femoral bubo; delirium; albuminuria.
48	Female	Mahomedan	25	Unknown	Died	2nd	100	Left axillary bubo; delirium; bubo, keratitis, sclerotitis, and disorganisation of the left eye; albuminuria.
49	Male	Hindu	22	4th	Died	3rd	120	Left inguinal bubo; albuminuria; rhonchi in both lungs.
50	Male	Mahomedan	40	3rd	Died	4th	160	Right inguinal bubo; albuminuria; diarrhœa.

Christian, was admitted on March 11th. The serum treatment was begun on the 12th and he received 50 cubic centimetres of the serum daily until the 16th, when he only received 30 cubic centimetres; on the 17th 20 cubic centimetres were injected and on the 18th a final dose of 40 cubic centimetres was given. In all he had received 290 cubic centimetres of the serum. The urticaria appeared on the 19th, the day after the last injection. It appeared as a scattered rash over the thorax only; the wheals were large and discrete; it disappeared on the following day. The patient had a right femoral bubo which suppurated. Carbolic staining of the urine occurred in one case (Case 25). The serum, it will be remembered, contains 0·5 per cent. of carbolic acid in order to preserve it. The patient had received 60 cubic centimetres of serum on March 18th and 40 cubic centimetres on the 19th, or 100 cubic centimetres in all. This was equivalent to 0·5 cubic centimetre of carbolic acid. The urine became dark on the 20th, was still slightly stained on the 21st, but became normal again on the 22nd, when 40 cubic centimetres of serum were again administered. On this occasion the urine did not again become dark, but after an injection of only 20 cubic centimetres on March 25th it again became discoloured, and the injections were in consequence finally stopped. There was no albumin or blood in the urine at any time. The patient had a right femoral bubo which suppurated and three ulcerated and necrosed patches of skin on the right thigh and two furuncles on the right shin. These had all developed before the treatment began. In two cases acute keratitis passing on to general inflammation of the entire structure of the eyeball, developed. In one case (Case 1) the process was bilateral in the other (Case 48) it was confined to the left eye. In both cases the eye became completely disorganised; both cases were fatal. Erysipelas unfortunately caused the death of two patients. In neither could it be traced to the injections. In one (Case 26) the erysipelas developed over the bubo which was situated in the left groin and spread down the leg. In the other, which has been already referred to (Case 33), the erysipelas developed round a furuncle situated near the umbilicus and spread over the abdomen. In neither case did it develop near the site of the injections. An attack of cystitis complicated one case (Case 36). The patient was a malarial subject and a confirmed opium eater. He was a Mohamedan, aged 35 years, and was admitted on March 22nd. On that date 60 cubic centimetres of the serum were injected and on each of the two following days an injection of 40 cubic centimetres was given. The cystitis did not develop until March 30th. It was easily relieved and the patient recovered. (In Table II. the details of each of the 50 cases are shown in tabular form.)

Conclusions.—In view of the facts here recorded I was regretfully compelled to come to the conclusion that, whatever other serums might prove to be, this particular serum was not the long wished-for specific which should rank in the treatment of plague as the diphtheria antitoxin does in the treatment of that disease. The effect of the injections in the first few cases prepared me for disappointment and before the trial was half completed all hope of a successful result was at an end. The trial was, however, carried through with as much care at the end as at the beginning; the doses were increased until a maximum of 60 cubic centimetres per diem was reached. Possibly better results might have been obtained if still larger doses had been given, but the entire absence of any results with the comparatively large dose of 60 cubic centimetres gave no grounds for such a hope, and the only possible conclusion to come to as to the value of this serum was that it is an entirely indifferent substance in the treatment of plague, without influence for good or evil either upon the disease as a whole or upon the individual symptoms.

13 CASES OF PLAGUE TREATED WITH PROFESSOR LUSTIG'S SERUM.

In the month of April last year the 13 cases of plague under my care in the Parel Hospital were submitted to injections of a serum prepared by Professor Lustig of Florence and brought to India by Dr. Galeotti and Dr. Polverini who administered the injections. The cases were among the last admitted to the hospital before its closure early in May and consequently the experiment could not be prolonged. Much more extensive trials of the serum have been made both before and since and Professor Lustig has publicly claimed for this form of treatment that the case mortality of plague may be reduced by it from 86 per cent. to 40 per cent.[3] Unfortunately the details of his cases and the method in which the trial of the serum was conducted have not, so far as I am aware, as yet been made public. Without these details it is scarcely possible to form a just estimate of the value of any "curative" agent. The 13 cases treated with this serum in my wards were not selected in any way. Just as in the trial of Yersin's serum every alternate case of plague admitted to the wards, provided the diagnosis was certain and the patient not absolutely moribund, was submitted to the injections.

Dose.—The majority of the patients received one daily injection of 15 cubic centimetres of the serum. In some the dose was 20 cubic centimetres and a few patients received two injections daily of 15 cubic centimetres each. The total amount of serum received by individual patients varied from 15 cubic centimetres to 95 cubic centimetres.

Clinical effects.—In some cases a fall of temperature followed the injections. Whether the fall was the result of the injections it was not easy to say, as falls of temperature are not at all uncommon in plague patients. No other effect upon the symptoms of the disease could be observed. Albuminuria was present in at least eight of the 13 cases and of these five patients died. The symptom did not appear to be in any way affected by the injections.

Results and mortality.—10 of the 13 patients died. The mortality was therefore 77 per cent. 10 of the patients were males, and of these eight died, or 80 per cent. Three were females, of whom two died.

Conclusions.—As I have already stated, the number of cases was so small that it would be unjust to base upon them alone a final conclusion as to the value of the serum. By themselves it must be confessed that they lend no support to the claims of the serum as a "curative." I left Bombay immediately after this brief experiment came to an end and have not since been in a position to observe the result of further and more extended trials of this serum.

Calcutta.

FOREIGN BODIES IN THE PHARYNX AND ŒSOPHAGUS.

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FOREIGN bodies in the œsophagus or pharynx of children often give rise to alarming pharyngeal irritation, but, generally speaking, little difficulty attends prompt treatment. Fish-bones and orange-peel often become blocked and I have several times had considerable trouble both in feeling and removing a minute spicule which had occasioned alarming symptoms due to spasmodic contraction of the pharynx and œsophagus. In one case, that of a small boy, aged about seven years, who was supposed to have swallowed a pin, I was sent for hurriedly to perform a tracheotomy in consequence of spasm of the glottis. After completing the operation and making a search for the foreign body we discovered and extracted the end of a wooden match. Doubtless during its two days' sojourn it had either penetrated or set up other mischief at the base of the epiglottis.

I have kept no record of my cases of foreign bodies in the pharynx, but they have been very numerous, and amongst other oddments one has noted fish-bones, orange-peel, apple, date-stone, plum-stone, camel's hair brush, and slate pencil. In one case, that of a child, aged three years, where the obstruction from a pin had lasted for two days, I was called because of attacks of dyspnœa. The patient lived in the country and when I arrived was dead. No opportunity was given to see what mischief the foreign body had set up. The case, however, is an ample warning against delay and serves to emphasise the dictum that a surgeon should never leave his patient until the obstruction is removed. In the Stanley Hospital some years ago I remember an abscess of the neck, very deep-seated, being opened and found to communicate with the pharynx. The patient three weeks previously had suddenly experienced pain in swallowing which became easier and no trouble arose until the appearance of the abscess. Probably, however, some undiscovered foreign body had

[3] THE LANCET, Nov. 26th, 1898.

given rise to the local infection. On one occasion I removed with no difficulty a plate with seven teeth which had lain for two days at the back of an elderly woman's tongue. It had given rise to considerably less physical than mental trouble, as she had only complained of a constriction above the cricoid and some difficulty in swallowing.

Needless to say the treatment in these cases should be prompt and persistent. Nothing is better than after anæsthetising the mucous membrane to explore with the finger, more especially the sulci between the pillars of the fauces and the tonsils. This seems a favourite locality for a small, irregular mass to lodge. Exploration should be very gently done and if nothing can be found an attempt to see either with or without a laryngoscope should follow. It is very rare that one's patience is not rewarded. In the case of children I would strongly advocate that the search be made with the head lowermost. In two cases a fit of coughing in this position brought up a plum-stone and a piece of gristle. One is less likely to dislodge into the trachea or œsophagus if this upside-down position be made the routine one, for in this connexion it may be well to remember that death has occurred from spasm of the glottis where a dislodgment of a foreign body from the pharynx to the trachea was brought about by a practitioner not prepared for immediate tracheotomy. I would question the advisability of any attempt to push bodies which prove intractable and are supposed to be angular or irregular into the stomach, despite the authority of more than one excellent surgeon. In all cases where large bodies which are difficult to move threaten to interfere with the breathing laryngotomy should be performed without delay. I have extracted coins from the œsophagus on three occasions and on one occasion I pushed a two-shilling piece into the stomach. For the purpose of extraction the double coin-catcher is an excellent device but its use requires a little practice, while the sponge probang acts well in pushing a body towards the stomach. I have often examined patients with a history of foreign body—generally bones—in the œsophagus and have found nothing. In such cases a pulta ceous diet for a few days is indicated. So far I have never been unfortunate enough to have experienced the ill-effects sometimes observed where unrecognised small obstructions have given rise to subsequent trouble. Williams of Manchester reported the case of a man who after eating a chop experienced pain in swallowing. Examination made three days after by means of the finger and horsehair probang failed to discover the presence of anything. Six days after the accident the man was feeling much better although swallowing was still attended with pain. On the seventh day in the morning there was a slight expectoration of blood. About midday a large quantity of arterial blood was thrown up and death followed immediately. At the post-mortem examination a perforation was found on each side of the œsophagus at the same level, that on the left piercing the aorta an eighth of an inch above the first right intercostal branch. A case related by Barataux shows the danger of blindly pushing irregular bodies into the stomach. False teeth were impacted low down in the œsophagus, several efforts at extraction being unsuccessfully made. There was great hæmorrhage and the patient died from exhaustion. At the necropsy a portion of the denture was found in the colon; the other portion was found in the œsophagus eight centimetres above the cardia, and above it was an enormous laceration of the œsophagus. The laceration penetrated the posterior mediastinum which contained pus and alimentary substances. About a quart of liquid of a similar kind was found in the right pleura. There was a second laceration of the œsophagus and an almost complete severance of the epiglottis.

I have twice extracted teeth from the entrance of the œsophagus, one of my patients dying. The first case was that of an old man, aged over 70 years, who during the night swallowed a denture containing two teeth. I was not able to feel the plate although it was clearly indicated as inhabiting the lower part of the pharynx. On passing a flexible metal sound I readily discovered its site at about the level of the cricoid. Having cocained the throat a curved crocodile forceps was passed and without the slightest difficulty the plate, short of one tooth which subsequently issued per rectum, was extracted. In unhappy contrast with this case was that of a captain, an old friend, who came to the Royal Southern Hospital having swallowed an irregular large toothplate with hook-like extremities. My colleague Dr. W. Alexander and myself, although we could quite easily feel the mass, took over half an hour to extract it. The patient who had a diseased heart seemed to do fairly well for about eight days, when on sitting up in bed he suddenly died. We were not allowed to make a post-mortem examination. I have no doubt that a sub-hyoid pharyngotomy would have been better surgery, but it is difficult to let go a body which can be felt with the finger and which one expects every minute to yield to the forceps.

I have performed œsophagotomy three times with two recoveries. In each instance the operation was performed upon adults and in each case for teeth. Two of the patients were men and one was a woman. The case of the woman was interesting, as the teeth had been embedded just above the episternal notch for four days. She was 49 years of age and forgot to remove a small toothplate during the night. Efforts were made next day to extract the teeth without effect and emetics had been administered. The medical attendant then endeavoured to push the plate towards the stomach. Happily, however, the jamming took place just before it had passed the entrance into the thoracic portion. She was in a good deal of pain when I saw her, very exhausted and apprehensive. She could swallow milk without much inconvenience. Œsophagotomy was at once performed. An incision three inches long was made low down at the insertion of the sterno-mastoid. This muscle was divided in order to give more room. A metal probang passed into the œsophagus through the mouth facilitated the operation. An incision was made just above the plate which could be felt behind the episternal notch. Removal was effected by very gentle traction. The œsophagus was closed by interrupted sutures and the wound in the neck was left open and packed with cyanide gauze. The patient made an excellent recovery despite a sinus which was six weeks in closing. There was no rise of temperature from first to last. My second case was in a man, aged about 40 years, who had swallowed a very angular plate which could be located just below the cricoid. Efforts at extraction had been already made and there was considerable interference with both breathing and swallowing. The plate had been fixed for 24 hours. An incision was made on the left side. No difficulty was encountered until an attempt was made after incising the œsophagus to remove the teeth. It was only after cutting the plate and holding each end with forceps that a removal was effected. The œsophagus was carefully stitched with continuous sutures and the wound was packed. This patient recovered fully in three weeks. My third case was that of a man, aged about 38 years, who was brought to me by Mr. J. T. Jones of Llansilin. He had on the previous day swallowed a large toothplate. It could be made out quite easily behind and below the cricoid. The patient was taken into the Royal Southern Hospital, and assisted by my colleague Mr. Newbolt an operation was at once performed. It offered no difficulties of any sort, and I thought myself justified in both stitching the œsophagus and the wound in the neck. This error in judgment I feel sure cost my patient his life, for he developed cellulitis in the neck, the evil from which no surgical measures could overtake. He died on the fifth or sixth day.

Radiography in the case of coins, metal plates, and other foreign bodies has already proved of service and will much simplify diagnosis, and in this connexion one may draw attention to two cases of a halfpenny in the œsophagus reported by Mr. Francis Johnston and Mr. C. Thurstan Holland. The first was that of a child, aged two and a half years, who had swallowed the coin two days before admission into the hospital. The skiagraph showed the piece in the œsophagus and it was easily removed with a coin-catcher. The second was the case of a child, aged three and a half years, with a doubtful history of having swallowed a halfpenny. 13 months after the swallowing of the coin the Roentgen rays were applied and it was found and removed by means of a coin-catcher. Similar cases are reported by White and Delatour.

Space will not permit a summary of the treatment of foreign bodies in the œsophagus. Gandolphe, basing his conclusions on the observations of Galliard and Richardson, shows that the average distance from the teeth to the cardiac orifice of the stomach in females measures about 37 centimetres, of which 18·5 are extra-thoracic, while in males the distance is about 40 centimetres, 20 being supra-sternal. If the impaction occurs within 30 centimetres of the teeth œsophagotomy should be resorted to where a rough body

gives rise to unpleasant symptoms. If it has remained harmless and quiescent for some time, in view of the seriousness of the intra-thoracic operation it may be left alone. The extraction is rendered easier by the fact that the œsophagus is very moveable in the vertical direction and can be pulled up. If the impaction is further than 30 centimetres gastrotomy is indicated, the hand if necessary being introduced into the stomach. Bearing closely on this point one may refer to the experiments of Professor Richardson of Harvard University. He found it quite possible that with the right forefinger introduced by œsophagotomy and the left by gastrotomy he could not only make the fingers touch but in many cases overlap. The advantages of gastrotomy for digital exploration are well shown in Dr. William T. Bull's case.[1] A peach-stone had become impacted in the œsophagus of a coloured boy about 13 inches from his teeth. A median incision was made three inches in length extending from the level of the ninth costal cartilage to two inches above the umbilicus and a further incision of one and a quarter inches into the stomach. Through this the index finger was inserted into the œsophagus until it reached the foreign body pressed down from above by a bougie. A slender bougie was then passed through the stomach and out through the mouth. A piece of sponge was attached to the lower part of this bougie which was then drawn through the mouth. This ingenious operative procedure brought up the foreign body. Mr. W. H. A. Jacobson very graphically relates a case where he failed to dislodge after gastrotomy a foreign body at the cardiac end of the œsophagus.

From a study of my own cases of œsophagotomy and a perusal of general results I would submit: (1) that bodies which have lain for some time and given rise to symptoms of obstruction, irritation, or dyspnœa should be operated upon without delay; (2) that forcible attempts at extraction by the mouth are to be condemned; (3) that sharp or irregular impacted bodies specially demand œsophagotomy; (4) that in certain cases gastrotomy is indicated and in some a combination of gastrotomy and œsophagotomy; (5) that where the wound in the œsophagus is jagged or its walls inflamed no stitches should be used; (6) that the routine practice where the œsophageal wound is clean cut is to stitch it up with a continuous suture, care being taken as in the case of the intestine not to pierce the mucous coat; (7) that only in very exceptional cases where no danger of suppuration and infection exists should the external wound be closed; and (8) that liquid food may be given by the mouth in about 24 hours after operation.

Liverpool.

THREE CASES OF CARDIAC THROMBOSIS IN DIPHTHERIA.

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CASE 1.—A boy, aged nine years, was admitted to the Eastern Hospital on Nov. 10th, 1898, suffering from diphtheria of five days' duration. The symptoms were very severe, the tonsils and soft palate being covered with membrane, with swelling of the neck, rhinorrhœa, and fœtor of the breath. On admission he received 8000 units of antitoxin, the dose being repeated on the following day, while on the third day 4000 units were given. On the 12th the membrane had largely separated and troublesome epistaxis occurred. The patient was very restless, constantly calling out and tossing about in bed. The pulse was regular, but rapid—130 to the minute. On the 13th vomiting began and rectal feeding was started. On the 15th the patient was much quieter and rather drowsy from the influence of opium. The pulse had dropped to 116. On the 16th in the morning the pulse was 120 and quite regular. Opium having been omitted the boy had again become very restless and noisy. The fauces were ulcerated, but all the membrane had disappeared. The glands at the right angle of the jaw were beginning to enlarge again. At 6.30 P.M. he was suddenly seized with severe præcordial pain and became even more restless than before, constantly moaning and crying out. The pulse was regular, small, and rapid. At 11.45 P.M. the pulse was very irregular, perhaps two or three quick beats followed by a pause, then one or two slow ones, then another pause, and so on. The rate was between 70 and 80 per minute. The heart's apex beat was diffuse, fluttering, and displaced downwards and outwards. The sounds were indistinct, but no bruit could be heard. The respiration was almost of the Cheyne-Stokes type, the period of rapid breathing being accompanied by moaning, crying out, and struggling. At 2 A.M. on the following day the patient was weaker but still very restless, with a frightened, agonised expression of face. The lips were cyanosed. He could not speak, but in answer to the question as to where the pain was put his hand over the heart. The pulse was still very irregular but not intermittent. This condition continued till death occurred at 2.45 A.M. Opium and morphia injections afforded but little relief. No stimulants were given.

Necropsy.—A post-mortem examination was made at 3 P.M. on Nov. 18th. The left ventricle, the auricles, and the large veins were full of soft black clot. The right ventricle was dilated and distended with a mass of discoloured and black post-mortem clot; it was easily removeable. The apex of the ventricle was lined with a substance of fairly firm consistence from about a quarter to half an inch in thickness and of a yellowish grey colour, becoming pinkish on exposure to the air. Its surface was irregular and it was firmly attached to the endocardium so that it could not be washed off, though it could be torn away with forceps. On section it was laminated and almost spongy in places. One portion of it, rather more prominent than the rest, was rounded and on incision was found to contain a thickish fluid-like pus mixed with blood. The cavity was of a size to contain a large pea and had well-defined walls. Under the microscope the fluid was found to contain numerous granular nucleated cells like large leucocytes, a few altered red blood corpuscles, and granular débris. Similar ante-mortem clot was found in the right auricular appendix. The heart muscle was pale and the valves generally were rather opaque and tough. At the entrance to the aorta were three or four specks of atheroma. The coronary arteries were normal. The lungs were œdematous and engorged. There were some old pleuritic adhesions and a few of the bronchial glands were caseous and calcareous. There was no sign of an infarct in any organ. Examination of the brain was not allowed.

CASE 2.—A boy, aged seven years, entered the Eastern Hospital on Nov. 4th, 1896, with very severe faucial diphtheria of seven days' duration. 8000 units of antitoxin were at once injected. On the 5th most of the membrane had separated, but on the following day some recrudescence occurred and 1500 units of antitoxin were given. On the 7th the soft palate was paralysed and on the 9th vomiting began, the patient then being very weak and anæmic. On the 12th it was noted that the heart sounds were "fairly good." On the morning of the 13th the boy complained of pain and slight tenderness in the epigastrium. Vomiting still continued and the anæmia was more marked. At 7 P.M. the epigastric pain was more severe and pulsation was noticed together with a cantering rhythm of the heart. The patient was very restless, tossing about in bed. On the 14th after the administration of morphia the pain and pulsation were less marked, but later in the day pain and restlessness returned and the breathing became stertorous. The pulse was very soft. At 8 P.M. the breathing was nearly regular and of a sighing character during sleep but became quite regular and deep when the patient was roused. The pulse was very irregular and disposed to run. It could not be counted. The breathing continued about the same but the pulse failed more and more and the patient died at 10.45 P.M. The treatment was by morphia, brandy, digitalis, and strychnine.

Necropsy.—At the post-mortem examination on Nov. 16th the right ventricle of the heart was dilated and full of loose black clot; the left ventricle, also dilated, was full of black clot, as also were the auricles. The lower part of the left ventricle was occupied by an ante-mortem clot of a pinkish colour which had broken down in the centre into a soft material of the consistency of laudable pus. The part of the clot towards the cavity of the ventricle was very firm and formed almost a distinct partition. The valves were normal. In one kidney was a large infarct of a yellow colour and in the spleen a very large infarct of a pink colour. The liver was slightly nutmeg. In the pelvis was a little straw-coloured fluid and a large flake of lymph, but no other

[1] Medical Record, March 6th, 1897.

evidence of peritonitis. The lungs were engorged and œdematous. The left tonsil was ulcerated.

CASE 3.—A boy, aged seven years, was admitted to the Eastern Hospital on Jan. 2nd, 1894, having developed a sore throat two days before. On admission membrane was present on the tonsils and the left side of the palate. On Jan. 7th he developed the rash and other symptoms of scarlet fever. On the 10th the patient was very pale and weak. The pulse rate was 140. It was regular, but too weak to count at the wrist. Vomiting began. On the 18th the fauces were free from exudation. The pulse was 160 and inclined to run. The heart sounds were not clear, but there was no bruit. The knee-jerks could not be obtained. The liver could be felt two or three inches below the ribs. On the 20th an abscess of the neck was opened and a quantity of very offensive pus evacuated. On the 22nd the pulse was 140 and regular. The trunk and neck muscles and the diaphragm were weak. Respiration was of a sighing character. Abdominal pain was complained of, especially along the edge of the liver, in which region a rough scraping feeling was detected and a distinct rub was heard. On the 24th the patient was weaker with wandering delirium. The heart's impulse was diffuse, being seen from the second to the sixth intercostal space on the left side and over a large part of the epigastrium. The rate was 150 and regular. On the next day the epigastric pain continued. A squint had developed and the skin was of a dusky appearance. On the 26th there were attacks of pallor and of "gasping for breath." Swallowing was impossible. There was constant abdominal pain and also pain in the front of the chest. The cardiac dulness and impulse extended to one inch beyond the nipple line. The character of the breathing suggested pleurisy, but no rub was heard. Death occurred at 10.25 P.M. In this case stimulants were given freely and hot fomentations were applied to the abdomen.

Necropsy.—At the post-mortem examination on Jan. 30th the heart was found to be decidedly enlarged. The right side was broader and the apex of the heart was broader and more rounded than normal. All the cavities were full of post-mortem clot. The right auricular appendix was distended with ante-mortem clot of a reddish-white appearance which was adherent to the wall of the appendix at its apex. In two or three places the interior of this thrombus was broken down into a soft matter of the consistence of pus but of a pinkish colour. On the outer and upper surface of the appendix there was hæmorrhage beneath the pericardium. There was also ante-mortem clot at the apex of each ventricle, firmer than the bulk of that in the appendix. In places, however, there were points of softening. The left appendix, the valves, and the endocardium were normal. In the lower lobe of the left lung were numerous infarcts of various sizes measuring from a quarter of an inch to one inch at their base. Nearly all were of a yellowish colour and softening. One or two were more recent. In the left upper lobe was a large recent infarct of a dark red colour. There was lymph over the pleural surface of the infarcts. The right lung was tough and somewhat airless. It was free from infarcts. The liver was large and nutmeg, and its upper surface, anterior edge, and the region of the gall-bladder were covered with lymph. The rest of the peritoneum was healthy and no infarcts were found in the other organs. Both tonsils were swollen and much excavated and the abscess cavity in the neck was still open.

Cardiac thrombosis is probably, in the absence of valvular disease, of rare occurrence in any disease. In the case of diphtheria it is of special interest quite apart from its rarity. Until the last few years there was a widespread belief that sudden death in that disease was the result of the formation of a clot in one or more of the cavities of the heart. The belief was based partly upon a want of knowledge of the difference between an ante- and a post-mortem clot and partly upon a feeling that sudden death must be due to a cause correspondingly sudden. More numerous necropsies, however, have shown the fallacy of this belief and the cause of death is now sought in nerve and muscle degeneration. The three cases recorded above were the only instances of cardiac thrombosis in over 200 consecutive post-mortem examinations on patients who died from diphtheria at the Eastern Hospital. Degenerative changes in the heart muscle were common and occasionally dilatation of the organ. As a rule, there was abundant post-mortem clot in the cavities but nothing more, nor were infarcts found in the viscera.

The mode of death in diphtheria has undergone some modification since the introduction of the antitoxin treatment. It is comparatively rare now to see death result from extension of the disease to the air passages and lungs as was so common formerly. In the great majority of cases we see a slow heart failure characterised by failing pulse and vomiting. In such patients though restlessness is common, and some præcordial or abdominal distress not unusual, it is very rare to see severe pain. In the above three cases, however, this symptom was most striking. Although in the third case it was obscured by the pain due to peritonitis it was none the less present. The only one of the patients I myself saw during life was the first and here the pain was most marked. It was of sudden onset and very acute, not mere distress but intense agony, agony like that of angina pectoris. Apparently it was not due to the formation of the thrombosis, as it began only eight or nine hours before death, whereas the thrombus was of considerably longer duration, being found at the necropsy to have undergone softening. It seems more reasonable to ascribe the pain to distension and dilatation of the heart. In the other two cases the pain was less severe and in these the dilatation of the heart, though well marked, was of a less acute character. The thrombi themselves did not seem to give rise to any symptoms, probably because they were too small or too distant to interfere with the action of the valves. In none of the cases did death take place suddenly. On the contrary, the patients, as is not unusual in diphtheria, lingered for days after all hope had been abandoned. The heart failure was markedly slow and gradual. It is, however, possible that if a large piece of a thrombus were to become loose it might so hamper the valves or so block the aorta or pulmonary artery as to cause almost instantaneous death. Dr. R. F. Rooney records the case of a patient suffering from diphtheria who was suddenly seized with violent cardiac pain and became almost moribund. She rallied, however, the pain shifting to the back and then to the leg. Gangrene followed, and the amputated limb showed embolism of the popliteal artery. The pain was apparently caused by the passage of a piece of dislodged clot through the valves and down the aorta. Such cases, however, must be extremely rare. In two of my cases infarcts were found after death, while in the other they were absent, probably because the thrombus had not had sufficient time to disintegrate. There was no evidence that the infarcts had had any influence in hastening death or that the detached piece of clot had caused pain in leaving the heart. Should the embolus reach the brain it might give rise to hemiplegia. Thus Henoch describes a case of diphtheria in which at the necropsy cerebral embolism was found with thrombosis of the left auricle. Hemiplegia, however, is a rare complication of diphtheria. It has only occurred twice at the Eastern Hospital in the last 4000 cases. In neither instance could any heart lesion be detected and both patients recovered.

It is worthy of note that though in all my three cases the diphtheria was of a very severe character, yet in all there was the possibility and even probability of some secondary infection. The first case showed faucial ulceration till death with commencing secondary adenitis. In the second case tonsillar ulceration was found at the necropsy, while the third case was complicated by scarlet fever and an abscess had formed in the neck. This last case was of a milder type and came under treatment earlier than the other two, but unfortunately it occurred in the days when antitoxin was unknown.

I am indebted to Dr. Goodall, medical superintendent of the Eastern Hospital, for permission to publish these cases.

Homerton, N.E.

MEDICAL DEPUTY MAYOR.—At the meeting of the Falmouth Corporation held on April 27th Dr. Arthur Ben Harris, J.P., was appointed deputy mayor.

BRISTOL JUBILEE CONVALESCENT HOME.—It is hoped that this institution will shortly be opened for the reception of patients. A meeting of the governors was held on April 27th under the presidency of Mr. E. Payson Wills. There were nearly 20 applications for the post of medical officer and eventually Mr. J. S. Griffiths, L.R.C.P. Lond., M.R.C.S. Eng., was elected. For the position of matron 73 candidates applied and Miss A. Ellis of the Bristol General Hospital was appointed.

A CASE OF ACUTE PEMPHIGUS.

BY WILFRED HADLEY, M.D. DURH., F.R.C.P. LOND.,
ASSISTANT PHYSICIAN TO THE LONDON HOSPITAL;
AND
WILLIAM BULLOCH, M.D. ABERD.,
BACTERIOLOGIST TO THE LONDON HOSPITAL.

IN 1895 G. Pernet[1] described a case of rapidly fatal pemphigus in a journeyman butcher, and Pernet and Bulloch[2] from a study of the literature of the subject were able to bring together eight similar cases of this rare disease all occurring in butchers and following a lesion usually of the fingers or hand. The present case is submitted as a further confirmation of this remarkable coincidence.

The patient, a man, aged 23 years, was admitted into the London Hospital on June 4th, 1898. He was a powerfully developed man and a butcher by occupation. He had wounded his right thenar eminence on a piece of jagged bone while dressing the carcass of a sheep. The wound, which was over an inch in length, bled a little and afterwards discharged a small quantity of pus. On the third or fourth day he observed some blisters on his chin and anterior nares, followed on the next day by a bullous eruption on the back of the neck and later on the trunk, abdomen, and thighs. On the sixth day from the onset he was admitted into the hospital, when he presented the following condition. Around the anterior nares and on the chin the eruption had formed impetiginous crusts, as also one patch on the forehead. On the rest of the face, on the forehead, and on the scalp large numbers of bullæ were observed, some of which had burst. In size they varied from that of a pea to that of a large walnut. Between the shoulders several large bullæ had run together and had burst. Opposite the angles of the scapulæ were some raised red patches which were not accompanied by pain or itching. On the part of the chest and abdomen, especially in the neighbourhood of the pubes and also on the inside of the thighs and on the legs, the bullæ were very numerous and partly confluent. In the axillæ the bullæ were very large and tense, and they were numerous on the arms and hands, the palms being extensively affected. Ruptured bullæ were also observed on the dorsum and right side of the tongue and on the left pillar of the fauces. Two small ulcers on the inner side of the left leg were said to be caused by a kick received a month previously. Only a few of the bullæ were surrounded by an inflammatory areola. The patient did not complain of pain and his viscera were apparently normal. The temperature on admission was 101·2° F. He was ordered boric baths and boric ointment, and arsenic and quinine were administered internally. During the subsequent days the temperature fluctuated between 99·4° (morning) and 103° (evening). Fresh crops of bullæ developed and his condition became serious. Vomiting and severe diarrhœa supervened, the pulse became frequent and feeble, and the respirations shallow, and he died on June 11th, seven days after admission and 13 days from the development of the first symptoms. On the day before death—i.e., on June 10th—the temperature was 99·0° in the morning and 101·6° in the evening. On the morning of June 11th it was 101·2°.

The post-mortem examination made by Dr. Schorstein 36 hours after death showed a few adhesions of the right pleura. The spleen weighed six and a half ounces and was soft. The kidneys, which weighed 11 ounces, were in a state of cloudy swelling. The weight of the liver was 4 lb. 4 oz.; it was slightly fatty. The mesenteric glands were enlarged and softened. In one or two there were likewise a few minute hæmorrhages. The solitary follicles along the greater part of the large intestine and for three feet above the ileo-cæcal valve were enlarged and the mucous membrane was congested.

Two days before death a bacteriological examination was made of three recent bullæ (several hours old). The surface of the bulla was touched with a hot glass rod and a quantity of the clear, limpid fluid was aspirated into Pasteur's pipettes. A number of cover-glass preparations were made. The fluid contained a diplococcus staining by Gram's method and the leucocytes present were almost exclusively eosinophile. The fluid of the blisters was inoculated into bouillon and gelatin, and agar plates were also poured. In 24 hours a pure culture was obtained of the above-mentioned diplococcus which in subsequent sub-cultures appeared to be identical with the coccus isolated from similar cases of acute pemphigus by Demme,[3] Bleibtreu,[4] Bulloch, and Russell Wells.[5] The diplococcus, as far as could be ascertained, differed very considerably from any of the well-known pathogenic cocci. Two cubic centimetres of the fluid of a bulla were injected intravenously into a rabbit, but without result. One cubic centimetre of the first bouillon culture likewise gave negative results.

The examination of the liver, spleen, kidneys, and intestines of the patient did not yield any characteristic results. Bacterium coli commune was isolated from the spleen and from the liver (probably post-mortem invasion). No diplococci were found in the heart blood or in the sections or cultures from the viscera. The kidneys presented the appearance of severe cloudy swelling. The epithelium of the intestinal mucous membrane over the reddened area was found to be desquamated and the vessels in this coat as well as in the submucosa were widely dilated and gorged with blood. Hyperplasia of the lymphoid tissue of the intestinal wall and of the mesenteric glands was very marked. It is to be regretted that a bacteriological examination of the blood was not made during life. The condition of the patient was not considered very serious at the time and the examination was delayed.

This case resembles very closely several of the cases collected by Pernet. The disease ran an acute course and was preceded by a definite wound which probably had some relation to the symptoms. The patient was a strong young butcher who had previously enjoyed excellent health.

In regard to the occurrence of the diplococcus mentioned above it has not been proved that it is the cause of acute pemphigus. Its absence in the internal organs would seem to show that the disease is to a large extent a toxic one, the toxin being probably bacterio-genetic.

[1] The Etiology of Acute Pemphigus, Brit. Med. Jour., Dec. 21st, 1895.

[2] Acute Pemphigus, a contribution to the Etiology of Acute Bullous Eruptions, British Journal of Dermatology, 1896, vol. viii., p. 157.

[3] Beiträge zur Kenntniss des Pemphigus Acutus, Verhandlungen des Congresses für Innere Medicin, Wiesbaden, 1896.

[4] Beitrag zur Kenntniss des Pemphigus Acutus, Berliner Klinische Wochenschrift, Band xxx., p. 671.

[5] Two Cases of Acute Pemphigus, THE LANCET, May 2nd, 1898.

RED-WATER OR TEXAS FEVER: A FURTHER COMMUNICATION.[1]

BY ALEXANDER EDINGTON, M.B., F.R.S. EDIN.,
DIRECTOR OF THE BACTERIOLOGICAL INSTITUTE, CAPE COLONY.

SINCE my communication[2] to the Royal Society of London by Professor Thomas R. Frazer I have been able to obtain valuable additional evidence as to the communicability of the disease by the use of blood derived from animals which have either recovered from the sickness for a very considerable

[1] Communicated to the Royal Society by Dr. Gill, F.R.S., on April 20th, 1899.

[2] The conclusions arrived at in that communication (June 6th, 1898) were as follows: 1. The blood of animals themselves healthy from a red-water area is dangerous if inoculated into an animal which suffers coincidentally from another disease. 2. That the blood of animals suffering from mild or modified red-water may be safely used to inoculate a healthy animal subcutaneously but is dangerous when injected into a vein. 3. That the subcutaneous inoculation of mild or modified red-water blood conveys a mild form of the disease and since the blood of such an animal is virulent when injected into a vein in another animal it is safely to be inferred that the animal suffering from the mild form becomes more or less immunised or "salted." On these grounds I would suggest a method of protective inoculation against red-water in the following manner. Having procured a healthy animal from a red-water area or one which is known to have been "salted," inoculate it by injecting five cubic centimetres of red-water blood into the jugular vein and five cubic centimetres subcutaneously. In cases where the operator is unable to attempt the vein inoculation I would recommend the subcutaneous inoculation of five cubic centimetres in four different sites. Allow at least 28 days to elapse and if any degree of illness is recognised the blood of this animal may be used, after being defibrinated, to inoculate healthy cattle. For such inoculation only five cubic centimetres should be injected into small animals and not more than 10 cubic centimetres into larger. Seeing, however, that the presence of other maladies renders such a proceeding unsafe I would recommend that it should only be practised during the autumn or winter when the veldt diseases are, as a rule, in abeyance and in no case when any epidemic disease is in the near neighbourhood.

time or which have been inoculated many months previously to the date on which their blood has been used.

On Dec. 8th, 1898, I withdrew some blood from animal No. 18, which has been continuously under observation since it was inoculated on Dec. 22nd, 1897. After defibrinating the blood 20 cubic centimetres were used to inoculate a young ox (No. 54) by intravenous injection. On the following day a sharp rise of temperature occurred which reached to 106·6° F. On the following morning it was observed to have fallen to 99·8°. Three days later the temperature was again over 104°, but it fell previously to the next morning. From this time onward an erratic course of temperature was observed and on the twenty-fifth day subsequent to inoculation the animal was seen to be ill; it refused food, but it had no definite symptoms of "red-water." Three days later it died. The blood on examination was seen to contain the spherical forms of the parasite. On post-mortem examination the bladder and urine were found to be quite normal. The liver was not enlarged, but was somewhat discoloured in patches, and the biliary ducts were distended with bile. The bile was much altered, being stringy and of a greenish-yellow colour. The spleen was normal in size and consistence. The kidneys were enlarged and the pelves were filled up by a yellowish gelatinous exudation. The cortex was somewhat congested, but there was no evidence of any true inflammatory change. The general muscles were pale in colour and there was slight evidence of jaundice. This experiment serves to show that an animal which has been inoculated with infected blood, while it may not develop much illness as a result of it, is really infected and, moreover, its blood, if drawn as late as a year subsequently, is yet so infective that an intravenous injection of it into susceptible animals will certainly infect and may even kill, although after a somewhat extended period of time.

Very important corroboration of this is furnished by the experience of inoculation for red-water which has lately been adopted in the Cape Colony. Four animals which were immune to red-water (three by reason of having had the disease and recovered from it and one by being born and reared on permanently infected veldt) were sent from Fort Beaufort to Queenstown to be used by the veterinary surgeon there for inoculation purposes. The animals to be used for inoculation had been "fortified"—i.e., re-inoculated with virulent blood—seven weeks previously. 20 animals were inoculated with defibrinated blood from one animal, the doses used being from 10 to 20 cubic centimetres, according to age. All had a febrile reaction and some slight symptoms of the sickness, but they easily recovered. From one of the other of the four animals blood was taken and used to inoculate seven head, giving doses of from 10 to 15 cubic centimetres. These also all had a reaction, but they made good recoveries. On Nov. 1st the four animals were re-inoculated with virulent red-water blood, and in each case five cubic centimetres were injected intravenously and 10 cubic centimetres subcutaneously. 29 days later they were bled. With this blood two lots of cattle were inoculated. One lot consisted of 107 animals which had never been exposed to red-water infection. The doses used were increased beyond those which I had recommended—namely, from 10 to 25 cubic centimetres were used, according to age. Of these animals no less than 17 died from characteristic red-water. The remainder made good recoveries. The second lot consisted of 53 head of cattle, all of which with one exception (an imported animal) had been born and reared on red-water veldt. The imported animal was the only one which showed any signs of reaction, but it made a good recovery. This experience has sufficed to show that it is not always safe to exceed the doses which I have recommended unless the animals which have been used for withdrawing blood have been untouched for at least a considerable number of months.

I have been able, with the coöperation of several farmers, to carry out experiments by which inoculated cattle have been fully exposed to infection at later dates. In May, 1898, I inoculated 10 head of old cattle with blood from an animal which had been inoculated six months previously with virulent blood. These cattle were immediately removed from the Institute and sent later to an infected area in company with 10 head of young animals which were uninoculated but, as is commonly known in this colony, are not so liable to death from this disease as are older animals. Of the young stock all have been infected by exposure in the veldt and three have died. Of the older and more susceptible animals not one has shown the slightest signs of illness and the cows have given birth to healthy calves. Mr. J. H. Webber had 28 head of Fish River cattle inoculated on Nov. 7th, 1898, and subsequently had them removed to his farm, which is well known to be one of the worst infested areas in the Eastern Province. Previous experience has shown that if clean cattle are placed there they become very quickly affected with the disease. On Dec. 5th one died from gall-sickness, but with this exception all have done very well and are at this date in perfect health.

This method of inoculation has proved so satisfactory to the farmers themselves that it is being very generally adopted and the farmers have petitioned the Government to arrange for an inoculating station being placed at Grahamstown, so that clean cattle coming from clean Karroo areas for transmission to the coast may be inoculated previously to entering the infested belt.

A CASE OF RECURRENT APPENDICITIS; OPERATION; RECOVERY.

BY W. JONES GREER, F.R.C.S., D.P.H. IREL.

THE patient in this case was a well-formed muscular youth, 18 years of age, who had had fairly good health with the exception of oft-recurring severe symptoms which could readily be connected with his present illness. The cause of his trouble was, he thought, an attack of fæcal obstruction which he had had about 10 years before—at least, I judge it to be fæcal obstruction from the treatment which his mother tells me was adopted. His life was despaired of, but it was saved by a "white powder" and "a large enema of castor oil." Since this time he had always had spasms of sharp pain in the right side after even slight exertion or prolonged standing which his work necessitated. During the last two years his symptoms had become of a more severe character. Hardly a day had passed without his having a sharp attack of pain. Obstinate constipation had been the rule; in fact, he believed the bowels could never have acted without the use of some aperient. If he neglected to secure a daily evacuation the pain became so severe as to require his remaining in bed for a day or more, and this neglect was, he thought, the primary cause of the four severe attacks of illness from which he suffered for two years. In July, 1898, I was asked to see him when he was then undergoing his third attack. His condition was typical of appendicitis. He was lying on his back with the right knee drawn up, his face was pale, his expression was anxious, and his tongue was thickly coated with a creamy fur. He suffered from constipation, his abdomen was distended and tender with constant pain, the point of maximum intensity of which was over McBurney's spot, where even the lightest touch with the finger caused great agony. The pulse which was small and hard varied in rate between 100 and 130, and the temperature range on more than one occasion touched 104° F. The patient was obviously dangerously ill and the prospect of recovery without operative interference was not great. I put the question of operation before the patient and his friends, but they declined it either as a deliberate procedure or, should circumstances of emergency occur, as a life-saving expedient—they would take whatever chance medical means could afford. The treatment adopted was to continue the efforts which had been made to keep the bowels unloaded and to relieve pain by means of subchloride of mercury, sulphate of magnesia, and opium, the patient being kept on a fluid diet. After over three weeks of an exhausting illness the patient began gradually to recover. When all the severe and acute symptoms had subsided I made a careful examination of the right iliac fossa. The result was not very satisfactory. No distinct tumour could be felt, but there was a sense of resistance over the region of the appendix and this, taken in conjunction with the idea which I entertained that there was probably an abscess, would readily make one feel a tumour, but I was not satisfied of its existence. Examination per rectum also gave no help. The final upshot of this attack was that he returned to business comparatively well. In January, 1899, I saw him again in his fourth severe attack. He told me that since his third severe attack he had had four or five smart spasms of pain which necessitated his lying in bed for at least one or two days at a time. This fourth attack,

though not nearly so severe as the third one, confined him to bed for 14 days. He had been so crippled with the pain and the frequent disablement that he was anxious to take the chance of an operation and was urgent in his demand for it to be carried out at once. As the attack was somewhat milder than the others I elected to wait until his temperature remained normal for a day or two and not to delay the operation for a longer period in order that the adhesions might not be too firmly organised.

The operation was performed on Feb. 9th in the patient's home. Dr. Hamilton administered chloroform and I had also the advantage of the able assistance of Mr. Corrigan and Mr. M'Ginn. In addition to ordinary cleanliness the site of the operation was prepared by washing with Parke and Davis's germicidal soap and the application of biniodide of mercury (1 in 500 in methylated spirit). A compress wet with 1 in 1000 potassio-mercuric iodide was kept on until just before the operation. The instruments, dressings, and sutures, &c., were sterilised in a steam steriliser before the operation. The steriliser was kept working during the procedure, the instruments alone being removed from it and placed in 1 in 1000 potassio-mercuric iodide. Our hands were prepared by washing and scrubbing in germicidal soap and then soaked in a saturated solution of permanganate of potash, decolourised in a solution of oxalic acid, and finally rinsed in 1 in 2000 potassio-mercuric iodide. The usual incision was made over the appendix; I had hoped, but it was found impossible, to carry out the proceeding by McBurney's method. After separating the fibres of the external oblique with a little difficulty, as this muscle was hard and infiltrated, I found the structures below this to be inseparable and indistinguishable. Scraping cautiously through what I took to be the internal oblique, the ascending colon presented itself and proved to be adherent to the abdominal wall from the cæcum almost as far as the costal margin. Before completely separating all the adhesions an effort was made to locate the appendix but it was fruitless. The only thing now to do was to free the caput from its adhesions and explore the usual situations. The process of separating these adhesions was a long and tedious one, as they were tough, thick, and vascular, and the small intestine and colon seemed to be indiscriminately mixed and bound together by strong bands. The cæcum and the colon were then entirely freed from the abdominal wall on each side of the wound. A further search then revealed a hard tumour behind the colon, towards its outer side, resting on the iliacus muscle, just above the anterior superior spine of the ilium. The readiest mode of access to this tumour would have been at the outer side of the colon, but the inflammatory thickening here was almost cartilaginous and was impossible to work through. Returning to the inner side the cæcum was lifted upwards and outwards and the tumour, which proved to be the appendix curled cochlea-like, was shelled out of the muscle. The appendix was somewhat of the fœtal type. It was considerably thickened and about two inches in length and a little over one inch in circumference at its base. It contained a concretion which apparently consisted of fæcal remnants. The route which the appendix had taken seemed to me to be through the sub-cæcal fossa, behind and to the outer side of the cæcum and colon. It was removed by circular amputation, ligatured, and the flaps were united with fine silk and inverted. The hæmorrhage from the adhesions was very considerable, but was readily controlled by forceps and pressure with sterilised mops. The omentum was brought down to cover the denuded colon and cæcum, the abdominal wound was sutured with silkworm gut, and sterilised gauze dressings were applied, the whole proceeding lasting just under two hours. The after course was uneventful. The stitches were removed on the fifteenth day. The wound healed rapidly by first intention, and except for a stitch abscess required no attention and the patient returned to business on April 3rd.

The important point in this case is that there was no pus. If an abscess had been found during the operation or if pus had formed and perforated during any of the attacks of illness one could hardly have hoped for so favourable a result in such a complicated case. Some may think that such a case would do well enough treated on medical lines, but most will agree with Mr. Mayo Robson's application of the rule, "When in doubt operate," and with the dictum of the late Mr. Greig Smith as regards suspicious appendices that "it is doubtful whether true wisdom and real caution do not abide with the bolder policy." I may finally point out that the observation of Byron Robinson that pain on brisk walking in cases of chronic appendicitis is due to the diseased appendix being within range of the action of the ilio-psoas would receive support from this case.

Newport, Mon.

CARBOLIC ACID AS A TEST FOR ALBUMIN.

BY WALTER COLQUHOUN, M.A., M.B., C.M. GLASG.

EARLY in the course of my practice I was led to investigate the delicacy of our common tests for albumin and to search for another test which would have the delicacy of the nitric acid test without its fallacies. A patient had come to me suffering, I believed, from chronic interstitial nephritis. I could not find albumin in his urine by the heat test except on two or three occasions when there was scantiness instead of excessive excretion of urine. The nitric acid test showed a trace of albumin apparently, but my confidence in that test was lost on discovering crystals after withdrawing some of the urine from the region of the cloud and examining under the microscope, and this occurred when the specific gravity of the urine was only 1012. The picric acid test was also unsatisfactory and I was led accordingly to seek a new test and to determine, *en passant*, another point on which I had no information—namely, what is the exact loss per diem of albumin when a trace is discovered in the urine. After a considerable amount of experimenting I chose a saturated solution of carbolic acid in absolute alcohol as a test equalling in delicacy the nitric acid test and giving perfect satisfaction after a short experience in working it.

One part of carbolic acid is soluble in about 20 parts of water at 60° F. or perhaps in about 13 parts if the solution has been made by the aid of heat; it is very soluble in alcohol (six in one approximately), in ether, or in glycerine. The test solution having been made by dissolving carbolic acid to saturation in absolute alcohol I float a few drops of the solution on the top of the fluid to be tested by means of a pipette. Owing to the greater solubility of carbolic acid in alcohol than in water the layer of testing fluid on the surface becomes opaque and rather milky-looking owing to the separation of carbolic acid as water is imbibed in the transfer between the urine and the alcohol. As the alcoholic solution of carbolic acid imbibes more water and becomes heavier drops also of a milky appearance on their surfaces may detach themselves and fall to the bottom of the test-tube. If much albumin be present the whole of the fluid to be tested may become milky and the alcoholic layer may settle quickly to the bottom of the test-tube with large milk-white flakes of albumin attached to it. In the case, however, of the presence of only a small quantity of albumin the test-tube must be allowed to lie for some time just as in the nitric acid test, and the presence of albumin will be denoted by a milkiness extending to a certain depth below the alcoholic layer. As has already been remarked, milky-looking drops of the alcoholic solution of carbolic acid may separate and fall to the bottom of the test-tube. This happens even when the alcoholic test solution is floated on top of pure water and, as has been explained, the milkiness is due to the imbibition of water and consequent separation of carbolic acid. That this milkiness is not necessarily due to albumin may be shown when only a trace of that substance is present by passing the bottom of the test-tube two or three times through the flame of a spirit lamp, when, carbolic acid being more soluble in warm water than in cold, the milky deposit at once clears up. The milkiness at the upper part of the test-tube below the alcoholic layer is, however, due to coagulated albumin and does not appear unless that substance is present nor is it dissipated by heat.

I tried solutions of carbolic acid in water, in ether, and in glycerine as tests for albumin, but none approached in delicacy the solution in absolute alcohol. The ethereal solution is floated on top of the solution of albumin. It shows also a milky layer below the ethereal solution, but the milkiness is slow in appearing and is not so pronounced as with the alcoholic test solution. I explain the greater delicacy of the latter test by the fact that the upper layer of the albuminous fluid to a certain depth comes to contain a mixture of alcohol and water and thus can hold more

carbolic acid in solution than water alone can do. The solution of carbolic acid in glycerine is passed to the bottom of the test-tube. It also gives a cloud but only after a long period, owing to the slowness of diffusion, and it also does not give such pronounced results as the alcoholic solution.

To determine the delicacy of the test I made up a solution of white of egg and proceeded to determine the amount of albumin per cubic centimetre (c.c.) by placing three cubic centimetres of the solution in a weighing bottle, evaporating to dryness at 180° F., placing the stopper in the bottle, cooling, momentarily removing the stopper, replacing it, and then weighing. Out of two estimations the first gave 0·0119 gramme of albumin per cubic centimetre of solution and the second gave 0·0121 gramme. Considering that the fluid was measured by a pipette the results are remarkably close and we may take the average, 0·0120 gramme, as representing the weight of albumin in each cubic centimetre of the solution which may be called solution A. One cubic centimetre of solution A was now added to 200 cubic centimetres of water and the mixture taken for testing with the various tests. I should mention here that the nitric acid test is commonly too carelessly done. I use a slender one cubic centimetre pipette to take up the nitric acid. The outside of the pipette is then wiped and the nitric acid is passed to the bottom of the test-tube containing the albuminous fluid. After delivery the upper end of the pipette is again closed by the finger to prevent admixture of the fluids during withdrawal and the pipette is withdrawn. The results of the first series of tests were as follows:—Heat test: Could not affirm presence of albumin by this test. Picric acid test: Clear by transmitted light; slight impairment of clearness by reflected light with the tube held against a dark background. Nitric acid test: Ring developed after an interval. Carbolic acid test: Milkiness in upper part of the tube; slight deposit of albumin finally.

The next series of tests were done with a mixture containing one cubic centimetre of solution A to 400 cubic centimetres of water with the result that the picric acid fell out of the competition. Continuing the tests I have found that, after allowing the tubes to lie for a considerable interval, both nitric acid and carbolic acid showed the presence of albumin in a mixture containing one cubic centimetre of solution A to 1000 cubic centimetres of water. Since one cubic centimetre of solution A contained 0·0120 gramme of albumin, dried at 180° F., each cubic centimetre of the last mixture contained only 0·000012 gramme of albumin. This result brings out in a striking manner the great delicacy both of the nitric acid test and of the test by solution of carbolic acid in absolute alcohol. The result works out at 0·0053 grain per ounce. Hence when a mere trace of albumin is found in the urine the amount of albumin (dried at 180° F.) lost per diem on a 50-ounce excretion of urine is only 0·265 grain, or rather less than one-third of a grain. The figures emphasise the fact that the anæmia accompanying cases of chronic interstitial nephritis is not at all dependent on loss of albumin, but rather on the ill-health following circulatory, alimentary, and nervous disorders. One cubic centimetre of solution A to 40 cubic centimetres of water gives a mixture which shows a pronounced milkiness on the application of the heat test, followed by considerable deposit of albumin. Yet even in such a case the patient would lose only 6½ grains of albumin (dried at 180° F.) per diem on an excretion of 50 ounces of urine.

As regards the fallacies of the test I have as yet found none which were not attributable to careless manipulation. Mucin may be precipitated by alcohol but I have had no trouble owing to its precipitation yet. I clear the urine, preferably by filtering, and it may be remarked in this connexion that the best Swedish filtering paper, such as is used for quantitative work, clears urine which a cheaper paper would allow to pass through cloudy. Another point worthy of mention is that cooling for a few moments, as, for example, by playing an ether spray on the upper part of the outside of the containing vessel, will often bring down a cloud of urates before filtering and is besides instructive as regards the degree of saturation of the fluid. In both the nitric acid and the carbolic acid tests the urine should be diluted to about specific gravity 1010. The proved delicacy of these tests allows plenty of margin for dilution and if after dilution no albumin be found its presence is in my opinion negligible. Indeed, I have found albumin present in small quantities in the urine of such a large proportion of my patients that I am coming to regard its presence merely as a warning to me to make a careful examination and a guarded diagnosis. If the urine were always diluted before applying the nitric acid test the fallacies of that test would probably disappear. In the case of the carbolic acid test it is important that the fluid tested should not have too high a specific gravity since in that case the interchange between the alcoholic layer and the fluid tested is too slow. The dilution may be continued to a specific gravity below 1010 without affecting the result much if such a course be wished. In conclusion, I may state that since my investigations I can speak with certainty as to the presence or absence of albumin, whereas before I had undertaken them I would not like to have certified in certain cases.

Glasgow.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL.

A CASE OF STRANGULATION OF THE VERMIFORM APPENDIX IN THE SAC OF A FEMORAL HERNIA; OPERATION; RECOVERY.

(Under the care of Mr. EDMUND OWEN.)

THE vermiform appendix not rarely is found in the sac of an inguinal hernia and is generally accompanied by other portions of the bowel. It is decidedly exceptional to meet with it in a femoral sac and it is extremely rare to meet with it as the sole occupant of such a sac. The two cases recorded below, one of which occurred in the practice of St. Mary's Hospital and the other in that of St. Thomas's Hospital, are well-marked examples of this condition and very few other cases are to be met with in surgical literature. J. Langton[1] had a case in which perforation of the included appendix had occurred into the sac; Keetley[2] describes a case in which there were symptoms of strangulation and the only organ found in the sac was the appendix. W. H. A. Jacobson[3] met with one case but no symptoms of strangulation were present. W. McAdam Eccles[4] showed a specimen illustrating this variety of hernia; the patient had died after perforation of a carcinomatous ulcer of the stomach. G. P. Newbolt has recorded a case[5] in which some obscure abdominal symptoms were present and he quotes a similar case recorded by Annandale. L. A. Bidwell has met with two cases of this rare condition[6]; in both of these the herniated viscus was returned after Gimbernat's ligament had been notched, and the patients did well; in neither case had there been any symptoms of strangulation. In all these cases, as well as in the two recorded below, the appendix vermiformis was the sole occupant of the sac of a femoral hernia. In a few cases there have been some symptoms suggesting intestinal obstruction, but they have been indefinite, and in most of the cases no severe symptoms were present but there was an irreducible femoral hernia. It has been suggested by W. McAdam Eccles[7] that in cases where the appendix is said to be strangulated the symptoms are really due to inflammation precisely analogous to that which occurs when the appendix is in its normal position. This may be so in some cases, but in many of the instances quoted the process was so firmly fixed at the crural ring that it was necessary to nick Gimbernat's ligament before it could be returned. For the notes of the case at St. Mary's Hospital we are indebted to Mr. P. G. A. Bott.

[1] St. Bartholomew's Hospital Reports, vol. xxvii., p. 179.
[2] Medical Press, 1890, p. 85.
[3] Operations of Surgery, third edition, p. 637.
[4] Transactions of the Pathological Society of London, 1897, vol. xlviii., p. 87.
[5] Brit. Med. Jour., vol. i., 1897, p. 781.
[6] Transactions of the Clinical Society of London, vol. xxx., p. 186.
[7] Loc. cit.

A widow, 65 years of age, was admitted into St. Mary's Hospital on Feb. 20th, 1899, complaining of a painful swelling in the right groin. It had appeared about a fortnight previously and had slowly increased in size; at first it had not caused her much pain except on pressure or on coughing, but for the few days immediately preceding admission it had caused her considerable distress. The bowels had acted regularly and she had not suffered from any vomiting. In the right groin there was a large, irregular, flat swelling, measuring about five inches by four inches; it extended from the upper part of the saphenous opening to about three inches above Poupart's ligament, and from the middle line outwards for about four inches along that ligament; downwards and inwards it extended to the right labium majus. The mass was hard, but in its deeper parts some fluctuation was apparently discernible. The patient looked very ill and she was taken at once to the theatre. Mr. Owen said that he did not know what the nature of the swelling might be, but that it was obviously necessary to explore it; he was inclined to think that it was a case of suppuration of the inguinal glands. A deep incision was made into the swelling and an abscess was opened and the contents were cleared out. At the bottom of the abscess cavity a dusky swollen body was seen of about the size of the end of a finger. This proved to be the vermiform process which was strangulated at the femoral ring. Adhesions had formed between the herniated appendix and the neck of the sac, so Mr. Owen gently drew down the process and having tied it close above the constricted portion he removed the swollen and sloughy end. He then cleansed the abscess cavity and stuffed it with perchloride of mercury gauze. The patient made a good recovery.

Remarks by Mr. OWEN.—I have on several occasions met with a herniated vermiform process in an inguinal sac, especially in operations upon children; but so far as I remember I have never before encountered one in a femoral hernia. Certainly I have never operated in a case in which a strangulated process was the sole occupant of the sac of a femoral hernia. I think such instances must be very rare.

ST. THOMAS'S HOSPITAL.

A CASE OF IRREDUCIBLE FEMORAL HERNIA CONTAINING THE VERMIFORM APPENDIX; OPERATION; RECOVERY.

(Under the care of Mr. W. H. BATTLE.)

THE second case illustrating this rare condition occurred in the practice of St. Thomas's Hospital.

A married woman, aged 59 years, was admitted into St. Thomas's Hospital on Dec. 16th, 1898. She had noticed a swelling in the right groin five years ago; it had appeared rather suddenly and had been very painful. After a fortnight in bed at home she was sent to a London hospital, where she was kept for three weeks. Ultimately the swelling went away and she had no further trouble until about 10 days before admission when she found that there was again a swelling with pain in the groin. She could not account for this as there had been no strain or injury. The swelling had been painful but she had not suffered from vomiting or from constipation. The swelling was situated in the femoral region; it was irreducible and tender on pressure. It was somewhat egg-shaped, was fixed to the deeper parts, and had an irregular nodular surface. No fluctuation could be obtained, neither was there any impulse on coughing. Deep pressure in the right iliac region caused a sensation of dragging in the swelling. It was not adherent to the skin. By the 21st, on which day the operation was performed, the swelling had dminished somewhat in size but otherwise was unaltered. The temperature had been normal. A longitudinal incision over the position of the femoral opening showed several enlarged and inflamed glands, but there was still a matted swelling over the femoral canal. This was separated on the inner side and an incision made into it. The peritoneum was soon exposed and further dissection showed the sac to be occupied by the appendix vermiformis and the meso-appendix. The end of the appendix was lost in the inflammatory tissues at the base of the sac. The meso-appendix was ligatured and the appendix was removed by the "coat-sleeve" method. The stump was returned into the abdomen. It was not possible to separate the sac from the surrounding parts, so it was cut off and the opening closed with silk sutures. The stump was then pushed into the ring and the fascia over the pectineus muscle was sutured to Poupart's ligament. The wound was then closed without drainage. The crural ring was small. There was no concretion in the appendix, which presented evidences of chronic catarrh. On Dec. 25th the stitches were removed and on Jan. 9th, 1899, the wound had quite closed. On Jan. 15th she left the hospital.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Congenital Tubercle in Calves.—Phagocytosis of Red Corpuscles.—Chromocytic Clumping in Acute Rheumatism.—Diphtheritic Paralysis.—Myeloid Tumour of the Neck.—Tuberculous Ulcers of the Stomach.—Exhibition of Specimens.

A MEETING of this society was held on May 2nd, the President, Dr. PAYNE, being in the chair.

Professor J. MCFADYEAN showed specimens of Congenital Tubercle from Calves. He observed that the occurrence of tubercle in calves of tuberculous cows was by no means frequent, the highest estimate being 1 in 3000. Actual congenital tubercle was extremely rare. He had only seen three cases since 1896, although he had offered a reward to any meat inspector who should send him one. In the first there was extensive tuberculous disease of the uterus of the parent. In the other two the uterus was not sent to him. Specimens were shown: 1. From a calf a day old in which there were numerous tubercles in the liver and scattered tubercles in the spleen and lungs and also in the heart. Tubercle bacilli were found in several of the lesions which presented the characteristic microscopic appearance of tubercle in cattle. A few of the caseous masses were partly calcified at the centre. 2. From a calf a week old. The parent cow had a tuberculous lung. The liver was riddled with caseous masses and the hepatic glands were caseous. There were numerous tubercles in the spleen and a few in the kidneys. There was little tubercle in the lungs. The escape of the serous membranes and the affection of the spleen were quite contrary to that obtained in adult oxen, tubercle of the spleen in those animals being almost unknown. Professor McFadyean thought that the infection was a blood infection and that it probably occurred in association with tuberculous mastitis.

Dr. F. W. ANDREWES showed Pus from an Injured Knee-joint exhibiting Phagocytosis of Extravasated Red Blood Corpuscles by Leucocytes. Seven days after an injury to the knee-joint acute arthritis set in and the joint was aspirated several times, synovia mixed with blood and pus being withdrawn. The patient ultimately recovered without loss of mobility in the joint. The pus-cells from the fluid removed were large and showed numerous included red corpuscles, especially in the fluid removed at the second aspiration. No organisms could be demonstrated either microscopically or by culture. The blood had probably been effused into the joint at the time of the accident and, acting as an irritant, was removed by phagocytosis. The fluid was a poor soil for bacterial growth when tested in the laboratory, remaining undecomposed for several weeks. But it was not actually bactericidal, as the anthrax bacillus and other organisms grew in it when it was intentionally inoculated. Chemically the fluid contained a large amount of nucleo-proteid.—Mr. RAYMOND JOHNSON asked if there had been sufficient interval of time before the fluid was drawn off for the organisms to have died. He mentioned a case of osteo-myelitis which had been left without the abscess being opened during the acute stage. When it was opened some days later the pus was discovered to be sterile.—Dr. ANDREWES, in reply, said that he had also seen a case of acute periostitis in which the pus was sterile on culture but in which the organisms could be seen in stained films. In the present case, however, no organisms could be found on staining. The first aspiration was performed four days after the onset of the arthritis.

Mr. S. G. SHATTOCK had on a previous occasion drawn attention to the action of the blood serum in acute pneumonia upon normal blood, the admixture as studied by means of the hanging drop leading to a highly exaggerated rouleaux-formation and massing or clumping of the red discs or chromocytes. He had on applying the same method obtained similar chromocytic clumping in normal

blood by means of the blood serum from cases of erysipelas and acute rheumatism; the reaction probably occurred in all cases of infective disease when the result of the increased agglutination was the more rapid sinking of the red mass and the formation of a "buffy coat." In one of the cases of acute rheumatism the reaction of the serum with normal blood was obtained by using the serum of blood drawn the day after the fall of temperature to the normal; in this case a repetition of the observation a fortnight later, the temperature having remained normal throughout this time, gave a similar result, showing that the change in the serum leading to the increased agglutination persisted during convalescence, as in the bacterial clumping obtained in specific infectious diseases. The blood serum, however, stood very little dilution. If the loop of serum were diluted with four of distilled water it produced no result on normal blood. Even when only once diluted the rouleaux-formation of normal blood was but little exaggerated. In all cases Mr. Shattock had checked the result by the study of normal blood similarly treated with normal human blood serum. Upon the leucocytes no change was produced. This could be seen in such preparations, but best if leukæmic blood was tested with the rheumatic serum. In such circumstances the chromocytes immediately became aggregated into islands, whilst the leucocytes, however large their numbers, remained unaffected. When the reaction ensued it was obvious to the naked eye, the hanging drop appearing as if it held a coloured precipitate. The reaction took place at once, though it might become more pronounced in the course of a few minutes.—The PRESIDENT recalled that many years ago the rapid production of rouleaux in blood from cases where there was inflammation had been demonstrated, and that it was then associated with the formation of the buffy coat.—Dr. A. E. GARROD said that in the blood from cases of acute rheumatism threads of fibrin could be seen between the clumps of red corpuscles. He asked whether Mr. Shattock thought that it was possible that the clumping might not be due to the contraction of these threads.—Mr. SHATTOCK said that he had never seen fibrin in sufficient quantity to cause such clumping as he described. The agglutination was so marked that it could be seen in the hanging drop by the naked eye.

Dr. F. E. BATTEN read a paper and gave a lantern demonstration dealing with the Pathology of Diphtheritic Paralysis. He said that while examining a series of cases the result of which he read before the British Medical Association in July last he was struck by the fact that although in nearly all the cases of long standing the pathological change found in the nerves was definite and marked, yet in one case in which the disease had lasted for 50 days no change could be demonstrated. He had therefore undertaken the examination of another series of five cases by the same methods which he had used in his first series—viz., Nissl's method, Marchi's method, and Pal's method. Four of these cases exhibited characteristic changes in the nerves; in one case, however, of 80 days' duration no change could be demonstrated in them. Two cases exhibited some change in the anterior horn cells as demonstrated by Nissl's method. In the first case it was limited to one cell and in the second although the changes were general yet too long an interval had elapsed between the time of death and necropsy to allow of the case being accepted without hesitation. He repeated the conclusion arrived at in his former paper—viz., that the dominant lesion was a parenchymatous degeneration of the myelin sheath of the nerve although a certain proportion of cases might be met with which give a negative result. In relation to the question whether the palsy was of nuclear or peripheral origin Dr. Batten considered that it was almost certain that a general poison like diphtheria must act on the whole neuron but that the effects of the poison manifested themselves (at least, in fatal cases) in the myelin sheath and not in the cell body itself.

Mr. H. J. WARING showed a Myeloid Tumour from the neck of a man 60 years of age. The tumour was an inch above the sternal end of the clavicle, lying on the left sterno-mastoid muscle, of the size of a large walnut. The neighbouring lymphatic glands were not enlarged and the tumour was not attached to the underlying muscle. The tumour had a basis of fibrous tissue with numerous myeloid cells and a number of oval sarcomatous cells. There were a few islets of hyaline cartilage. The tumour might have arisen (1) from the remains of a branchial cleft; (2) from detachment and displacement of a fragment of the sternal end of the clavicle; or (3) from the walls of a dermoid cyst. Mr. Waring thought that the first explanation was the most probable.

Dr. STILL recorded five cases of Tuberculous Ulcer of the Stomach in Children, the only cases he had met with in the examination of 226 children with tuberculosis at the Hospital for Sick Children, Great Ormond-street. In all the cases there was extensive tuberculosis in other parts of the body; in one there was general miliary tuberculosis with tuberculous meningitis; in the other four there was tuberculous peritonitis. Vomiting was present in all the cases and some had tenderness of the abdomen, but in the presence of the other tuberculous lesions no special significance could be attached to these symptoms. Four of the five children were under four years of age and one was only 10 months old; four out of the five were males. The ulcer was solitary in four cases and in all was situated at or near the lesser curvature. In one case perforation had occurred, but owing to the adhesions about the stomach there had been no acute peritonitis. The tuberculous nature of the ulcer was demonstrated by microscopic examination in three of the cases, and in the remaining two the naked-eye appearances left little doubt of their tuberculous character. Dr. Still said that from the number of cases which he had been able to find recorded, tuberculous ulcer of the stomach would seem to be more common in infancy and early childhood than at any other period. The predominance of the male sex might be related to the frequent association with tuberculous peritonitis which statistics showed to be more common in boys than in girls. Symptoms were not always absent; in one recorded case perforation with acute peritonitis and in another fatal hæmatemesis had been known to occur.

The following card specimens were exhibited:—

Dr. F. E. BATTEN: Tumour of the Spinal Cord in a Child.

Mr. H. J. WARING: Adeno-lipoma of the Sub-maxillary Gland.

Dr. ANDREWES: Tumour of the Socia Parotidis.

Dr. H. D. ROLLESTON: Tumour of the Socia Parotidis.

Dr. G. E. RENNIE: Tuberculosis of the Bladder and Kidneys.

Mr. CECIL BEADLES: (1) Unusual Tumour of the Breast; and (2) Bronchiectasis.

Mr. S. G. SHATTOCK: Enteroliths from the Rectum.

CLINICAL SOCIETY OF LONDON.

Exhibition of Cases.

A CLINICAL meeting of this society was held on April 28th, the President, Mr. LANGTON, being in the chair.

Mr. W. TURNER showed a case of Achondroplasia. The patient was a girl, aged 10 years, who looked considerably younger. There was no history of syphilis. The child was born of young parents and had two sisters, aged respectively seven and three years, who were in good health. The patient was only three feet high. The diaphyses of the bones were very short and had not increased in length *pari passu* with the increasing of the epiphyses. The three-year-old sister was three inches taller than the patient. The clavicle was as long as the humerus.—Dr. A. E. GARROD referred to a similar case which he showed to the society last year, a photograph of which was published in the Transactions.—Mr. R. BARWELL considered that the lordosis presented by the patient was analogous to that which was seen in cases of so-called dislocation of the hip and was probably due to an affection of the upper part of the femur which caused the patient to throw the buttock and tuber ischii backwards.

Mr. STANLEY BOYD showed a patient, aged 18 years, with Solution of Continuity of Both Femora. Two years ago, after much difficulty in walking, both femora gave way and the patient had become unable to walk or stand. When admitted to hospital there was a remarkable deformity of both thighs which persisted. Extension had been applied with marked improvement, especially in respect of the left limb. He showed on the screen skiagrams of the youth which showed the characteristic deformities of rickets, but the shadow of the solution of continuity in the bones was almost as dark as that of the bones themselves.—Mr. W. G. SPENCER thought that this was an example of one of the general diseases of the skeleton which did not fall into any definite category and which might be described as intermediate

between rickets and osteomalacia.—Mr. CHARTERS SYMONDS referred to a case recorded by Mr. Davies-Colley in vol. xxxv. of the Transactions of the Pathological Society which he regarded as similar. Both femora and both tibiæ were fractured. Subsequently large masses developed in connexion with the jaw, ribs, and pelvis. The patient died at the age of 15 years from paraplegia caused by pressure on the cord by the distorted spine.—Mr. BARWELL thought that the pain on movement suggested that there might be something inflammatory about the lesions. He did not think that the case mentioned by Mr. Symonds was a parallel one.

Mr. A. E. BARKER showed a case of removal of a Bullet from the Corpus Callosum where it had been localised by skiagraphy. The man had fired two shots from a revolver into the mouth. There was free hæmorrhage but no loss of consciousness. 12 hours after there was no trace of any nerve lesion except a slight drooping of the right eyelid. 18 days later he began to vomit frequently and on the twenty-eighth day it was noted that the left side was growing weak, hemiplegia being complete by the thirty-second day. There was marked optic neuritis most pronounced on the right side. Some improvement occurred and in a few weeks he was able to walk about. A skiagram was obtained which showed one bullet in the corpus callosum and one in the sphenoid bone. He had several epileptic attacks and after experiments on brains in the post-mortem room Mr. Barker trephined over the region and ultimately succeeded in removing the bullet from the brain on the sixty-ninth day. On recovering from the operation the patient was completely hemiplegic but motion returned first in the leg and then in the arm, feet, and hands. Then it was noticed that his trunk muscles were quite paralysed on one side as shown in the screen projections. He had since steadily improved, but as there was still optic neuritis Mr. Barker pointed out that the prognosis was doubtful.—The PRESIDENT thought that, as a rule, it was inadvisable to interfere in these cases since very often the presence of the bullet gave rise to no symptoms. He referred to three cases of bullet wound in the brain, in one of which a skiagram was obtained, in which no operation had been found necessary.—Mr. PEARCE GOULD inquired whether Mr. Barker thought that it was the removal of the bullet or the relief of tension which had brought about the amelioration of symptoms.—Mr. BARKER said that although tension was undoubtedly raised before the operation there was also irritation from the presence of the bullet.

Mr. E. W. ROUGHTON showed a case of Tumour of the Upper Jaw in a man, aged 39 years, who two years before had noticed a swelling on the upper jaw just below the left eye which had since gradually increased in size. There was a swelling of uniform hardness mainly occupying the left superior maxillary bone, also the nasal bone and the malar bone. The alveolar process was much thickened and the arch of the hard palate was much depressed. From the nose it was seen that the floor of the nose was depressed on one side, showing that it was a bony growth infiltrating not only the superior maxilla but also the adjacent bones. He had removed a portion of the growth which on section proved to consist of delicate trabeculæ of bone with spindle and round cells and some multinucleated giant cells. It might, he said, be leontiasis or a soft growing sarcoma.

Mr. A. PEARCE GOULD showed a woman the subject of Spontaneous Cure of Recurrent Carcinoma of the Breast, who had already been shown to the society in November, 1897. She was single and 49 years of age. In 1888 she received a blow on the left breast which was followed by a lump, which in 1890 was removed and on microscopical examination was diagnosed as scirrhus. In 1892 she returned with recurrence in the left axilla which was excised, and in 1894 recurrence had again taken place, and on this occasion there was a lump in the right breast. These were excised in December. In 1895 she returned with another recurrence in the scar and also the lump in the other breast and enlarged glands in the corresponding axilla. She also complained of shortness of breath and her condition was looked upon as incurable, and she was admitted to the cancer ward of the Middlesex Hospital. There were then numerous nodules around the scar and elsewhere and dulness at the base of the right lung. In March, 1896, she was unable to lie down in bed and there was a large lump in the right thigh bone. Nothing was done, but in June, 1896, she had lost her dyspnœa and the nodules had disappeared. The swelling in the thigh had diminished and was no longer painful. When he had shown the patient previously the scars alone were visible, and he showed her again to prove that the improvement was not ephemeral. Mr. Gould mentioned that the patient had menstruated the last time in January, 1895, and the improvement had been manifested many months later—viz., between March and June, 1896. No credit could be given to any treatment, for she had had none.—Mr. CLEMENT LUCAS asked whether Mr. Gould had himself made any microscopical examination of the growths. In one case of cancer of the breast he had tried the effect of oöphorectomy but the tumour grew very rapidly and he had to remove it.—Mr. G. TEMPLETON said that he had made sections of the original growth which was a characteristic scirrhus.—Mr. GOULD said that he had not himself made any sections. He could offer no explanation of the subsidence of the growth.

Dr. A. MORISON showed a case of Unilateral Hypertrophy of the Accessory Muscles of Respiration in a woman, aged 35 years, the muscles chiefly affected being the trapezius, sterno-cleido-mastoid, and scaleni.

Mr. MOUAT-BIGGS showed a patient wearing a new Splint for Injuries of the Clavicle which combined the advantages of Sayre's method and Ellis's splint. The elbow support and axillary pad being in one piece absolute fixation was obtained. It was light, cool, and comfortable, and rapidly applied with bandages or webbing. He had used it successfully for 15 years.

Mr. STANLEY BOYD showed a case of Excision of the Posterior Half of the Tongue and Epiglottis and also exhibited the specimen. The patient when seen presented an epitheliomatous tumour involving the posterior half of the tongue and the epiglottis. The growth reached nearly back to the spine. Mr. Boyd removed it by opening the pharynx and removing a portion of the hyoid bone, the tumour reaching down to the thyroid cartilage. The removal of the tumour left a cavity which he closed by a purse-string suture and the patient was able to swallow on the fifteenth day. Some recurrence had taken place low down in the neck where the glands were not readily accessible and this he had removed. The patient had since gained in weight and the tongue looked fairly normal, but there was some narrowing of the pharynx.

Dr. BATTY SHAW showed a case of Injury to the Roots of the Brachial Plexus in an infant, aged 13 months, in whom, consequent on violence exerted at birth on the left axilla, impairment of motion had resulted in the corresponding limb. Sensation was not affected.

Dr. NORMAN DALTON showed a man, aged 48 years, with Pulsus Paradoxus. There was no history of rheumatic fever, syphilis, or alcohol. There were râles and coarse friction over the lower two-thirds of the left lung, but no dulness. There was marked retraction of the apex beat, which extended from the ensiform cartilage to two inches below the nipple. There was also typical pulsus paradoxus, but there were no other signs of adherent pericardium or of chronic mediastinal cellulitis. The heart sounds were normal and the heart action was strong. As no tubercle bacilli could be found he suggested that there was probably chronic interstitial pneumonia, with pleuritic adhesions in the lower part of the left lung, with probably much fibrous tissue between the heart muscle and the chest wall and diaphragm and a certain amount of pericardial adhesion, though not enough to embarrass the heart.

Dr. BEZLY THORNE showed a case of Aortic Disease with Musical Bruit remedied by Baths and Exercise. The patient was a man, aged 45 years, without marked hypertrophy of the heart and with no increase of cardiac impulse. After an effort he had become breathless and had developed a musical bruit which incapacitated him from work. Under treatment by baths and graduated exercise he had gained in health, though the exaggerated cardiac dulness remained unaltered, and he was about to resume work.

Mr. W. G. SPENCER exhibited a case of Excision of a Meningocele and showed a Skiagram of the condition. Previously to the operation, which was performed at the age of seven months, the child had never been seen to use the lower limbs at all, but since had kicked about like a normal child. Mr. Spencer had opened the sac and dissected out the cauda equina, &c., bringing together the walls of the sac by a double row of sutures and keeping the child in such a position that the wound was the highest part. No untoward symptoms had followed and no cerebro-spinal fluid had escaped through the wound.

Mr. WILMOTT EVANS showed a case of Ossification of the Tendo Achillis in an elderly man who presented a hard

tumour in the left tendo Achillis which in a skiagram appeared to be calcified if not ossified. There was a history of two injuries 12 and eight years ago but the condition was not noticed until 12 months ago.

EPIDEMIOLOGICAL SOCIETY.

The Relations of Bacteriology with Epidemiology.

A MEETING of this society was held on April 21st, Dr. FRANKLIN PARSONS, President, being in the chair.

Dr. FRANK R. BLAXALL read a paper on the Relations of Bacteriology with Epidemiology. The conception of a *contagium vivum* though foreshadowed by Athanasius Kircher in 1671, while the origins of epidemics were still ascribed to meteoric influences or supernatural agencies, and boldly enunciated by Plenciz of Vienna, was no more than a hypothesis until the microbe observed by Pollender in 1849 was in 1863 shown by Davaine to be the essential cause of anthrax and the subsequent labours of Pasteur, Lister, and Koch proved by demonstration or analogy that all fermentation, putrefaction, and infection were the work of bacteria and other low organisms. Epidemic and endemic diseases might be referred to one or other of two groups, the first consisting of the acute exanthemata, with perhaps one or two more, all being general affections, conforming to a constant clinical type, highly infectious and conferring lasting immunity; the second comprising a number of diseases, as typhoid fever and cholera, diphtheria, tuberculosis, tetanus, zoötic diseases communicable to man, erysipelas, and all forms of septicæmia, venereal diseases, &c., mostly originating from a definite local lesion, less uniform in character, little communicable save by direct infection and with the exception of typhoid fever not conferring more than a transient immunity. It was remarkable that, while the microbes of most of the latter group had been identified, those of the former still eluded detection or defied artificial cultivation, though they might long retain a dormant vitality out of the living body. In the latter group, with which bacteriologists were best acquainted, the bacilli of tuberculosis, tetanus, anthrax, and diphtheria conformed with every one of Koch's and Martin's postulates, but suppuration might be set up by several different organisms, and some, as the pneumococcus, were capable of inducing different morbid processes and could not be properly described as specific. Except perhaps some irritation, the effects of bacteria were due not to their mere presence but to their products—enzymes setting up fermentative action, peptonising, &c.; ptomaines generated by them from dead matter and more or less poisonous; and toxins which were the causes of the phenomena of the disease and had not been isolated, being something contained in, and at present inseparable from, the albumoses which alone had been precipitated. Some held that these toxins were the immediate product of the bacilli, others that they were formed in and from the juices of the living body by enzymes produced by the bacteria. This latter view, which was maintained by S. Martin, derived considerable support from the quasi-incubation and other phenomena, strongly suggestive of a continued production of the poison, occasionally observed in laboratory experiments on animals with the products of the bacteria, freed from the bacteria themselves, obtained by the filtration of fluid cultures. Infection, however, was a matter of dosage, and apart from natural resistance, or that which the individual seemed to enjoy in respect of organisms long parasitic on his own body, a great degree of tolerance could be acquired or conferred by the continued repetition of sub-lethal doses; and if these were given of progressively increasing virulence, as in the preparation of diphtheria antitoxin in the horse, there seemed to be no limit to the possible power of resistance. This, however, was not the fact. A point was at length reached when resistance broke down and immunity was lost, and in this phenomenon, he thought, we might find the explanation of relapses in typhoid fever, the production of the antitoxin having proceeded at too rapid a pace before the toxin was eliminated. A sequel to the discovery of antitoxin by Behring was that of Widal in respect of typhoid fever—that the serum of a person suffering, or who had suffered, from that fever and was therefore immune exerted a peculiar and specific action on the bacilli of the same disease in artificial cultures; and both phenomena had been observed in other diseases. Artificial cultures of anthrax, tetanus, and diphtheria fulfilled Martin's requirement of producing their special toxins, tubercle, plague, glanders, erysipelas, and others conformed to all of Koch's postulates; and the blood of relapsing fever reproduced the disease but the spirilli had not been cultivated out of the body. On the other hand, several forms of micrococci and streptococci induced septicæmias clinically identical, while pneumococci gave rise to several lesions other than pneumonia, as meningitis and otitis media. Complete as our knowledge of the bacteriology of diphtheria was in most respects there were still several problems awaiting fuller solution, as the presence of Löffler's bacillus in apparently healthy throats and the occurrence of cases of clinical diphtheria in which it could not be detected. But negative evidence was of little value and the converse observation was easily explained by the tolerance acquired by the individual who, however, remained a source of danger to others. The failure to discover the Eberth-Gaffky bacillus in water believed to have been the vehicle of typhoid fever had been urged against its claim to be the cause of that disease, but was also easily accounted for by the long incubation of the disease, the large volumes of water through which it might be diffused, and its perishable character, while such water rarely failed to show the presence of bacillus coli and others more retentive of vitality demonstrating the fact of excremental pollution. The specificity of the tubercle bacillus was now beyond doubt, but predisposition played a most important part in the propagation of the disease and, considering the wide prevalence of tuberculosis, the long duration of the morbid process, and the fact that the bacillus flourished outside of the living body, it seemed that preventive treatment should be directed to the amelioration of the predisposing conditions—the destruction of sputa, the sterilisation of milk (if affected cows could not be excluded from dairies), and the avoidance of the aggregation of phthisical patients in hospitals, the best treatment of phthisis being work in the open air. In a disease of indefinite duration it seemed useless to look for the means of immunising. The bacteriology of cholera had been unsettled of late by the discovery that Koch's comma bacillus was not alone, but that in different cases bacilli were present similar in form though distinguishable one from the other and so far specifically different that their sera were not mutually protective. The bacillus of plague was now cultivated and the disease reproduced in several animals. Rats were especially susceptible, being attacked spontaneously during epidemics, but it was not certain whether they or man were the first to develop the disease. The rapid and complete disappearance of the plague from this country within a few years after one of the worst outbreaks was a problem of the deepest interest and had never been satisfactorily explained. Was it possible that it was still with us enjoying a saprophytic existence? As regards influenza there could be no doubt of its highly infectious character, but he did not expect much help from bacteriology whether in the way of prevention or of cure.—After some remarks from the PRESIDENT Dr. WASHBOURN observed that Brieger's ptomaines were alkaloids, which the toxins, though not yet isolated, did not appear to be, and that the lapse of a period like the incubation of a fever following inoculations with sterilised toxins did not prove them to be enzymes, for after the injection of solutions of arsenic into the peritoneal cavity the symptoms of poisoning were often delayed for some days. It was a matter of absorption and of resistance on the part of the individual. When influenza was attended with mucous discharges the detection of the bacilli was conclusive, but often there were no secretions to aid the diagnosis.—Colonel NOTTER, R.A.M.C., and Mr. PAKES discussed the relative values of the chemical and bacteriological examinations of water, the latter disparaging Parietti's procedure which might, he said, kill the bacillus typhosus together with the bacillus coli or spare both.—Dr. GOODALL insisted on the need for a revision of Koch's postulates which Koch himself had admitted, some of them being incapable of fulfilment in the great number of specific diseases. Dr. Newsholme's profound researches into the relations between epidemics of diphtheria, the rainfall, and other conditions showed that we had much to learn as to their causation that bacteriology alone could not teach us, and there was also a wide field for investigation in symbiosis or the concurrent action of two or more species of microbes in increasing susceptibility or in producing or modifying a disease.

CHELSEA CLINICAL SOCIETY.

Tuberculosis.

A SECOND special meeting of this society was held at the Jenner Institute of Preventive Medicine, Chelsea-gardens, S.W., on April 25th, the President, Mr. J. FOSTER PALMER, being in the chair. The subjects of discussion were the Recent Investigations relating to the Prevention and Treatment of Tuberculosis.

The PRESIDENT opened the proceedings by a short sketch of the history of the "oxygen" and "open-air" treatments. The former had been recommended by Priestley in the early part of the eighteenth century and had been employed in 1780. In 1800 Dr. Hill had advocated its use in the treatment of "scrofula" but since then it had not been well received except for syphilis. After 1860 they came to the open-air treatment which was carried out in 1864 by Dr. Blake, whose patients used to spend the whole day in the open air. This treatment, at one time considered empirical, had now been endorsed by bacteriological research. Dr. Blake stated that the indispensable condition for preventing the progress of tuberculous disease was free contact with the open air. Since tuberculous children often grew into healthy men and women, to what extent, the speaker asked, was the sanatoria treatment valuable and rational? What was the usual mode of ingress of the tubercle bacillus? Did it enter from the inspired air through the bronchial tubes or make its way by slow degrees to the lung through the lymphatic glands? The latter view seemed to be the favourite one. If the tonsils acted as protective agents to the direct infection of the lung this fact would have an important bearing on tonsillotomy.

Dr. C. THEODORE WILLIAMS in his remarks on the preventive and climatic treatment did not believe, as did some German and English authorities, that climate was an unimportant factor in treatment. The open-air treatment did not dispense with the necessity for change of climate. He looked upon it as the basis of prevention, but then came the question:—In which climate could the open-air treatment be best carried out? With regard to the open-air treatment in different countries two considerations should be borne in mind: (1) the more easily climatic treatment was carried out the more effectual it would be; and (2) what sort of climate was the most salutary? A country like Egypt, where shelters were not required and where it was not necessary to muffle up the patient before going out, was better than a country like England or Wales. Dr. Ransome's researches had shown that a climate with abundant sunlight and fresh air, as Egypt or the Riviera, was better than a district with very little, such as the south coast of England. For those, however, who were unable to go abroad a comparatively satisfactory open-air treatment could be practised in England. With regard to the second condition, statistics of various sanatoria on the continent could not be relied upon, although they all agreed in claiming a large percentage of improvements. Three charts showing (*a*) the results of different climates compared, (*b*) the influence of high altitude climate, and (*c*) the influence of sea voyages were then shown and explained to the meeting. The deductions which Dr. Williams drew from these were that "cavity" cases did very well by sea voyages and that "scrofula" was better treated thus than in any other way. When the patient returned from the high altitudes he had a remarkable development of the chest and his breathing was more or less of a puerile nature. In referring to relapses, the subsequent history of his "high altitude" cases showed a more permanent improvement than that of the "sea-voyage" cases and he attributed this difference to the increase of chest-girth. The drawback to the Riviera was that the patient had to spend several winters there instead of 12 months as in the high altitudes.

Dr. J. E. SQUIRE, who spoke on General Preventive Treatment, said that we could not apply isolation because of the long duration of the disease. To prevent tuberculosis the coöperation of all sections of the profession was required. In formulating preventive measures certain points must be understood: (1) the nature of the infective agent; (2) the way in which this infective agent left the body; (3) how it was conveyed to susceptible subjects; and (4) how it got into the body and what were the conditions there which favoured or hindered the development of the disease. The rooms of phthisical patients should be thoroughly disinfected before they were used by other people, the bacilli developed outside the body being thus destroyed. In the human subject early detection, if followed by attempts to cure, meant an early cure, but in animals detection should be followed by destruction. All sputa should be received in vessels containing some liquid and either be emptied into a hot fire or mixed with a germicide solution before being thrown down the drain. Phlegm should not be swallowed and the handkerchief should be held in front of the mouth while coughing. Tuberculous mothers should not suckle. Among cows tuberculosis might be prevented by the proper inspection, ventilation, and cleansing of sheds, the destruction of tuberculous cattle, and the examination of milk. All milk should be boiled or otherwise sterilised until such efforts became successful. Dr. Squire remarked that the infective agent was conveyed by the air and by food. Soiled bandages and handkerchiefs, if not destroyed, should be disinfected. Congenital tuberculosis was extremely rare, but inoculation through a cut was possible. The marriage of those who were tuberculous should be prevented and if married they should occupy separate beds. To prevent tuberculo is the people should be kept away from the sources of infection. Infants should not occupy the bed of a tuberculous parent and their general management should be looked after, not only as regards ventilation, sunlight, food, exercise, and hours of work, but also the choice of occupation and place of residence for the adult. In referring to the vexed questions of isolation and notification Dr. Squire remarked that theoretically notification was desirable, but that there was some difficulty in applying it. Registration would be useful if tuberculous people would submit to the advice of their medical practitioner and when they were very ill be moved to special hospitals. No scheme of prevention would be complete unless it provided for people willing to be removed in the early stages of the disease as well as for those who were too ill to work.

Dr. ROBERT MAGUIRE said that general treatment must be directed to killing the tubercle bacillus. This might be considered in two ways: (1) the direct poisoning of the bacillus and (2) by assisting the natural powers of the body in fighting the bacillus. He would not deal with the first way, as it had been arranged that Dr. S. H. Habershon should take up that part of the subject. Dr. Maguire said that it was perfectly true that open air and sunlight killed the tubercle bacillus outside the body, but that open air and sunlight in the treatment of phthisis was a very different thing. Dr. Maguire divided his remarks on this subject under two headings: (1) the improvement in general nutrition; and (2) the treatment of complications which might arise and which might interfere with general nutrition. Proper feeding at stated times, whether in sanatoria or not, regular habits, open air, and sunlight were essential, but the most important of these was the food. He thought that too much fuss was made about the special feeding of phthisical patients and that ordinary diet was best for them. He then quoted the ordinary diet at Brompton Hospital, which was not excessive; there were only two meals at which the patients had meat. Luxuries were reserved for only hopeless cases. More weight was put on under this ordinary diet than by pampering the patient with the more delicate "chicken and fish" diet which was sometimes desirable. For failing appetites slight delicacies, such as sardines, herring, jam, and so on, and occasionally half-a-dozen oysters, worked wonders in bringing back the patient to the routine diet. He then quoted four cases of ordinary increase of weight, in all of which cases the disease was deeply seated. He did not believe that this increase in weight was due to any change from a poor diet to a good diet and he illustrated this by an example. These increases were not extraordinary but good, steady gains in weight. He thought that cod-liver oil was a better aid to digestion than anything else which was available, and discipline and regular habits were also of the highest importance in the treatment. He then mentioned the complications which might arise, such as vomiting, diarrhœa, peritonitis, sweating, high temperature, bronchitis, cough, pleurisy, laryngitis, and hæmoptysis and their treatment.

Dr. S. H. HABERSHON said that all means of treatment were subservient to one end—the increase of the resisting power of the individual—and appeared to act by improving nutrition and increasing the vigour of cell-action. In the organism there was probably a two-fold resisting power which was directed first towards the destruction of the bacillus and, secondly, towards the neutralisation of the poison produced

known as toxin. The destruction of the bacillus was accomplished by the active phagocytic power of many of the leucocytes which swarmed to the irritated spot, produced by the toxic chemical products of the bacillus. Resistance of the individual in some measure depended on the activity of the phagocytes, evidences of the power of which have been obtained by the microscope, and resistance also depended on certain chemical qualities due to the secretion of living cells. With this secretion the question of immunity was closely bound up. Living cells probably possessed the power of secreting some substance which neutralised the effect of toxins. Now the treatment of tuberculosis should be conducted on three great principles: (1) the introduction of drugs which had a direct bactericidal power (antiseptics); (2) general measures, drugs, and injections which improve nutrition, increase cell activity and vigour, and encourage phagocytic power, and in this connexion Dr. Habershon described the results of some experiments in the injection of glycogen in animals and human beings to increase cell activity; and (3) the introduction into the blood of antitoxins. The tuberculins of Koch, the serum of Carl Fisch, and the attempts made at seropathy by Maragliano, Dr. Theodore Williams, and Sir James Grant were then carefully described. All the various injection solutions contained some proteid or albumose and depended for their effects upon the reaction which was induced. Dr. Habershon did not think that a true antitoxin had yet been discovered, but he was confident that before the expiration of another century some substance would be separated which would act as a true antitoxin and would confer immunity against one of the most terrible and widespread of diseases.

Dr. F. R. WALTERS, who spoke on the sanatoria treatment, said that there were three important reasons why sanatoria were needed: (1) that every place was not equally suitable for the treatment of pulmonary tuberculosis; (2) that treatment in the active stages of the disease called for complete supervision of the hygienic conditions of living; and (3) that time and money were saved and better results were obtained by the treatment of numbers of consumptives in the same place. The place which should not be chosen for a sanatorium was a densely populated district with cutting winds or any warm or muggy spot. Supervision was not required if the disease were quiescent and the patient were intelligent, if the house were healthy, and if there were reliable servants and a sensible medical man; but if these conditions were impossible the patient was best in a sanatorium. Systematic treatment, the eating of suitable food, and ventilation approaching that of the open air day and night must be insisted upon. The patient should have carefully graduated exercises and the skin should be kept healthy. The expense of keeping 50 people in a hotel was less than that of keeping the same number in separate houses in the same style, and this argument applied to the economy of sanatoria. The very existence of the hospitals proved the advantages of coöperation; and there was, besides, a great economy in time when a medical man could see several patients in the same place and it would indeed be impossible to see them all if they were scattered. Generally speaking, the arrangements which had to be taken into account in the construction of hospitals applied also to sanatoria. Some people advanced as an argument against the erection of sanatoria that they were unnecessary, that the patients could get well without medical advice, and that therefore special treatment was superfluous. This was true of slight cases, but it was incorrect in the bulk of the cases, and so it behoved them all not to neglect the most valuable aid afforded by sanatoria. The personality of the physician in charge was also of great importance, as if he had influence over the patients much more could be done on their behalf. Again, private treatment was expensive and was limited to a few cases. The argument that it was wrong to isolate people suffering from a disease of such long duration was based on a total misconception of the facts. The patient was only kept in isolation during the critical condition, except at Nordrach, and the object of the sanatoria was rather to train the patient so that he might continue treatment under his ordinary physician. It was not true that the aggregation in one spot of tuberculous patients was a source of danger to the surrounding neighbourhood. The proof of this proposition was seen in the case of our own hospitals for phthisical patients and in the very simple precautions necessary for preventing the spread of the tubercle bacillus. "In conclusion," said Dr. Walters, "sanatorium treatment is the combination of all the hygienic and medical means known to be useful under one responsible medical head. It is rational, it is economical, it is perfectly safe for everyone concerned, it is the best means of hygienically training the patient, and it gives him by far the best chance of recovery."

Sir C. GAGE BROWN and Mr. R. NITCH-SMITH made reference to the advantages of Fifeshire and South Africa respectively as resorts for sufferers from tuberculosis.—The meeting concluded with votes of thanks to the speakers and to Dr. Allan Macfadyen who had so kindly allowed them to hold the meetings in the Jenner Institute of Preventive Medicine.

SOCIETY OF ANÆSTHETISTS.

Post-anæsthetic Paralysis.—Epileptiform Fit occurring during Anæsthesia.

A MEETING of this society was held on April 21st, the President, Dr. DUDLEY BUXTON, being in the chair.

Dr. TURNEY communicated a paper on Post-anæsthetic Paralysis. Post-anæsthetic palsies were sometimes, he contended, of central origin and were then due to vascular disturbance. They resulted from (1) hæmorrhage precipitated by arterial tension from struggling and excitement or venous congestion from asphyxia; and (2) softening described as occurring in chloroform narcosis in aged persons. Functional affections associated with mental excitement might also cause this condition. Paralysis might be caused by malposition of the patient's body, such as dragging the patient's arm or arms over his head. Cases illustrating these were cited. In some instances the paralysis persisted for some time. The muscles involved were usually the deltoid, the clavicular portion of the pectoral, supra- and infra-spinatus and brachialis anticus, biceps, and the supinator longus, and in these the "reaction of degeneration" was more or less complete. The lesion appeared to be one involving the roots of the fifth and sixth cervical nerves. The exact spot at which the injury of the nerve occurred was probably behind the posterior border of the sterno-mastoid just above the clavicle and seemed to be the result of compression of the nerve cords as they lie on the first rib by the clavicle. Prophylaxis consisted in avoiding dragging the patient's arm upward, the head being supported on a pillow and inclined to the side on which the arm was carried up. Other forms of post-anæsthetic paralysis were paralysis of single peripheral nerves, such as the musculo-spiral, from doubling of the limb under the body or from pressure against the edge of the operating-table. Paralysis of the anterior crural nerve due to pressure of the nerve between the thigh and the abdomen when the patient was in the lithotomy position had occurred. Exsanguination of a limb by a tourniquet sometimes gave rise to palsy. A case was described in which paralysis followed a hypodermic injection of ether in the left forearm, the nerve to the extensor indicis having been in this case actually injured by the hypodermic needle.—The PRESIDENT mentioned a case of Peripheral Paralysis due to pressure. He thought that the paralyses due to hæmorrhage were not sufficiently understood and it was important that the share which the anæsthetic took in their production should be more accurately defined.—Mr. TYRRELL mentioned a case in which the use of manacles drawing up the patient's wrists under anæsthesia resulted in paralysis.—Mr. C. S. WALLACE referred to the obscurity of some cases of post-anæsthetic paralysis.—Dr. TURNEY, in reply, doubted whether the theory that a toxic action of an anæsthetic was responsible for the paralysis could be considered proven.

Mr. HAROLD LOW read the notes of a case of an Epileptiform Fit occurring during Anæsthesia. The patient besides being alcoholic was in a pyrexial condition and extremely ill from appendicitis; she was given nitrous oxide gas and ether followed by ether and oxygen. After half an hour her pupils dilated, her breathing became deep, and she passed through apparently an epileptic fit which was followed by other slighter fits; finally, simple muscular twitchings occurred. There was no history of antecedent epilepsy or serious septic focus in the brain. No recurrence took place.—The PRESIDENT inquired whether the condition might not have been uræmic or whether the patient might not have been the subject of masked epilepsy.—Dr. TURNEY suggested that it was a Jacksonian fit the result of a minute hæmorrhage.—Mr. H. PATERSON suggested that the oxygen employed if

used in excess might have caused the convulsion—a result which did occur when oxygen was given under pressure in excessive quantity.—Mr. LOW replied.

The PRESIDENT in closing the meeting stated that it was the last of the session and he thanked the visitors and members who had assisted in making the session so successful.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Enteric Fever.—Foreign Body in the Œsophagus.—Diagnosis of Cerebellar Lesions.—Exhibition of Cases, Specimens, &c.

A MEETING of this society was held on April 14th, Mr. EDWIN LEE, the President, being in the chair.

Mr. A. E. PEARSON read notes of a case of Enteric Fever in which perforation had occurred on the sixteenth day, the patient being a boy, aged 14 years. A limited peritonitis was the result, involving the right iliac, hypogastric, umbilical, and part of the left iliac regions. The abdominal wall was opened in this latter region on the twenty-fifth day of the illness and about a pint of fæcal-smelling pus was evacuated. Drainage-tubes were inserted and satisfactory progress was made, the temperature, the pain, and the discomfort subsiding during 14 days after operation, when a relapse of the specific infection followed. This fresh rise of temperature lasted some 14 days, after which the patient made a good recovery.

Dr. BARRS reported a case of Enteric Fever in which perforation had taken place and which was treated by abdominal section and suture of the intestine with a fatal result. The patient was a boy, aged 16 years, who had been admitted to the hospital in the third week of his illness which was of average severity. Five days after admission he was suddenly seized with acute abdominal pain, soon followed by rise of temperature and vomiting. 24 hours later the pulse had gone up to 120, the face was sunken, and the hands were cold. The abdomen was rigid and motionless, distended below the umbilicus, and very tender to the touch. Gurgling as if of gas bubbling through a small opening in the gut was felt in the right iliac region. The liver dulness was replaced by a tympanitic note and a distinct fluid thrill could be felt in the lower part of the abdomen. Mr. Moynihan operated without delay. The abdomen was opened in the middle line, a large quantity of fluid, turbid and with flakes of lymph, escaping. There was intense inflammation of the parts of the peritoneum which were exposed to view. The perforation was found at once and was closed. The peritoneal cavity was then irrigated with saline solution and the abdomen was closed. The patient survived the operation for eight days, during which time violent diarrhœa alternated with violent vomiting. The necropsy showed that no attempt at closure of the intestinal opening had been made. Before the perforation took place there had been obstinate constipation. In addition to milk and other fluids a little bread-and-butter and potted meat had been given on two occasions. Dr. Barrs said that it was quite clear from the appearances at the time of the operation that the perforation had been produced by the extension of the sloughing process through the peritoneum and that the bread-and-butter and potted meat had played no part in its production. He was also inclined to advocate that in future cases the opening in the intestine should be brought to the surface and closed at some future time.—Mr. MOYNIHAN described the procedure which he adopted in the above case. The abdomen was opened by an incision about two inches in length between the umbilicus and the pubes. On opening the peritoneal cavity a large quantity of greenish-yellow turbid fluid escaped. The abdomen was flushed out with hot sterile salt solution. The left index finger placed in the wound to guide the flushing tube felt the impinging of the intestinal contents. The adjacent loop of gut was drawn to the surface and a perforation equal in diameter to a lead-pencil was found with thin ragged edges. Three Halsted's sutures were introduced and the perforation was closed. The peritoneal cavity was finally cleansed and drained by means of strips of iodoform gauze, which fixed the sutured gut immediately beneath the abdominal incision, which was partially closed.

Dr. BRONNER (Bradford) read notes on a case of a Foreign Body in the Œsophagus. The patient, a boy aged five years, swallowed a coin in June, 1896. He coughed a good deal for a few days and was very hoarse. Then for some months he had difficulty in swallowing liquids but could manage solids readily. In February, 1897, he had frequent attacks of spasm of the stomach and occasionally of the abdomen and the cough became much worse. The voice was fairly good up to the end of 1897, when it again became hoarse and the spasmodic cough became more marked. In April, 1898, the patient was first seen by Dr. Bronner, when there was impaired expansion of the right lung and there was much expectoration. The vocal cords were adducted and did not move. Tracheotomy was performed. A skiagraph showed a round foreign body near to the front of the fifth dorsal vertebra. The coin was pushed down into the stomach and was discharged per anum in five days. In 10 days the cough and dysphagia had disappeared. In the winter of 1898 he had broncho-pneumonia and large quantities of pus were coughed up. The apex of the left lung was opened and much pus escaped. The boy died a few days after the operation.

Dr. CHURTON, speaking on the subject of the Diagnosis of Cerebellar Lesions, described the signs observed in the case of a man, aged 30 years, who was admitted into the Leeds Infirmary on Dec. 28th, 1898. Four years previously he had received an injury on the left side of the head near the mastoid process. He had since had two attacks of severe pain in this region. A fortnight before admission the pain returned with occasional tendency to fall forwards, epileptic fits, increasing stupor, and marked weakness of the left arm and leg. The muscles of the left limbs were distinctly flaccid, the grasp and knee-raising power were much weaker on the left side, there was bilateral ataxy of the legs markedly shown when crossing them, and the arms were also ataxic (especially the left). Ataxy of the arms is said to be rare in cerebellar cases (G. Rummo). There were two additional signs: the patient could not close either eye singly and in convergence the left internal rectus was distinctly weaker than the right. Mr. Mayo Robson, to whom Dr. Churton was indebted for the opportunity of investigating the case, trephined over the left lobe of the cerebellum. The dura mater bulged at the orifice; no pulsation was perceptible. On incising the dura mater clear fluid escaped freely. On the next day the pain and ataxia were entirely gone and perfect recovery ensued within a fortnight. Apparently the lesion was serous meningitis. Unilateral atony and asthenia with bilateral ataxia of the legs have long been held by Italian authors (Luciani and Rummo) to indicate the cerebellum as the site of the lesion and, further, that it affects the lateral lobe on the same side as the paresis.

The following cases, pathological specimens, &c., were exhibited at the meeting:—

Dr. CHURTON: (1) A case of Splenic Leukæmia; (2) a case of Enlargement of the Spleen in a Boy, aged two years, who also showed at times a Cataleptoid State; (3) a case of Chronic Transverse Myelitis in a Girl, aged 15 years; and (4) a specimen of Extensive Aortitis.

Dr. CHURTON and Dr. TREVELYAN: Cultivation and other specimens from the Clear Articular Fluid obtained from a case of Post-pneumonic Arthritis.

Mr. L. KNAGGS: (1) Tubal Mole; (2) Abdominal Gestation; (3) Calculous Pyelitis; and (4) Granular Kidney with Calculus in an Unusual Situation.

Mr. E. WARD: Excision of the Pyloric Half of the Stomach (the patient and a specimen were shown).

Dr. WARDROP GRIFFITH: (1) A case of Congenital Syphilis; and (2) a case of Lead Poisoning.

Mr. LITTLEWOOD: Gangrenous Intussusception of the Small Intestine successfully removed from a man, aged 62 years.

Dr. TREVELYAN: (1) A case of Chronic Intermittent Tetany; (2) a case of Enlargement of the Liver; (3) Aly's Æsthesiometer; and (4) Three Pathological Specimens.

Mr. H. S. WALKER: (1) A case of Primary Chancre on the Eyelid; and (2) a specimen of Absolutely Black Cataract from an Injured Eye.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Internal Derangement of the Knee-joint.—Advancement of the Recti Muscles of the Eyeball.

A MEETING of this section was held on April 7th, Mr. R. L. SWAN, the President, being in the chair.

Dr. KNOTT read a communication on Hey's Internal Derangement of the Knee-joint in which he opposed the

generally received view that this lesion was a displacement of one of the semilunar fibro-cartilages of the articulation. He described the signs and symptoms of the condition as it had frequently occurred in his own person and compared them with the original description of Hey and the subsequent accounts of other recognised authorities on the same subject. Dr. Knott's own view was that a subluxation of the corresponding condyle of the femur took place, the joint then becoming locked, with the articular surface of the condyle overriding the prominent margin of the inter-articular fibro-cartilage.—Mr. T. MYLES said that he remembered Dr. Knott in 1882 enunciating the views which he still held. Mr. Myles mentioned that he had seen a considerable number of cases. In two cases he opened the joint expecting to find a loose cartilage, but found a pedunculated cartilage in the knee-joint. One case had a history pointing to displacement of the internal semilunar cartilage, but he found a small pedunculated cartilaginous body growing from the front of the joint, projecting between the condyle and tibia. On two other occasions he found the anterior attachments of the internal semilunar cartilage completely torn away. He had always found it impossible to attach the semilunar cartilage to the top of the tibia. In every case in which he removed a piece of the cartilage the patient always complained of permanent weakness in the joint.—Dr. R. C. B. MAUNSELL said that he had removed a semilunar cartilage a year ago from a girl's knee. She had complained for several years of recurrent attacks of the dislocation. Recovery was rapid and the patient was now perfectly strong.—Mr. CROLY said that he had seen some important cases of this condition. One case, a man, came to him with one knee slightly flexed and hopping on the sound leg; his knee-joint was locked. He failed to find relaxation of the ligamentum patellæ, nor could he feel anything nummular on the inside of the knee. Extension followed by sudden flexion gave instant relief and the patient insisted on walking home. He thought that there was a difference between symptoms of loose cartilage and this affection. The former caused a sickening sensation with pain in the knee itself, whereas the latter caused intense pain over the line of the internal semilunar cartilage.

Mr. STORY described the method of advancing the recti muscles in the treatment of Strabismus, which he had devised more than three years ago and had considered to be specially his own till an article in the *Annales d'Oculistique* informed him that the essential point in his operation had been anticipated so far as publication was concerned by Valude. The essential point was splitting the tendon longitudinally and suturing each half of it separately to the conjunctiva or sclerotic. Each half was engaged in a loop of suture lying at right angles to the direction of the fibres of the tendon and the knots were tied over glass beads to prevent the sutures cutting too rapidly through the conjunctiva. The modification of splitting the tendon had also been described by Praun in September, 1898, as a novelty. Valude's description appeared in August, 1896.—Mr. BENSON, Dr. MAXWELL, and Mr. CROLY discussed the operation.

SECTION OF MEDICINE.

Addison's Disease.—Pyloric Obstruction.—Chronic Pharyngitis.

A MEETING of this section was held on April 14th, Dr. J. W. MOORE, the President, being in the chair.

Dr. J. B. COLEMAN made a communication on the subject of Diseases of the Suprarenal Capsules and exhibited viscera and microscopic sections obtained from two cases, of which he narrated the clinical history. One case presented the classical symptoms of Addison's disease and occurred in a woman, aged 26 years, the duration of the disease being three years. Both suprarenal capsules were more than double the normal size and were a mass of fibro-caseous material, containing giant cells and tubercles; sections of the skin showed brownish-yellow pigment in the cells of the rete mucosum; the heart weighed only five ounces; in the duodenum close to the pylorus there were pinhead-sized greyish nodules due to hyperplasia of lymphoid tissue around the gland tubules. The other case was one of primary sarcoma of the suprarenal bodies, the patient being a man, aged 23 years, who presented none of the symptoms of Addison's disease. For three months before his death he suffered from epileptiform fits and on admission to hospital he exhibited the signs of ataxic paraplegia. The necropsy showed both adrenals uniformly enlarged to the size of a man's fist, the growths consisting of round-celled sarcoma; there was a secondary growth of about the size of a cherry in the wall of the right auricle; the spinal cord showed degeneration in the motor tracts and in the posterior columns. Dr. Coleman suggested that the epileptiform fits and the degeneration in the spinal cord were the result of a toxæmia, the latter being due to the diseased condition of the adrenals.—Dr. FINNY pointed out that great destruction of the suprarenals could take place without any of the symptoms of Addison's disease supervening. There was also a group of cases which presented all the evidence of suprarenal melasma while a necropsy showed that the suprarenals were perfectly healthy. He himself had an example of the latter group under his care. The patient was suffering from tuberculous disease but the suprarenals were unaffected. He therefore thought it probable that the disease was due to some affection of the large nerve elements in the neighbourhood rather than to structural changes in the gland itself.

Dr. PARSONS read a paper on Cases of Pyloric Obstruction.—The PRESIDENT, Mr. CROLY, Dr. G. J. JOHNSTON, and Mr. LANGFORD SYMES discussed the paper.

Dr. ROBERT WOODS read a payer on Chronic Pharyngitis and its relation to nasal obstruction, in which he expressed his belief that mouth-breathing was the essential cause of chronic simple inflammations of the throat. He pointed out how in mouth-breathers the disuse of the special apparatus for modifying the air, by warming, moistening, and filtering from dust, must affect the throat injuriously. He also drew attention to a common condition of the nose where the passage, though free enough in the daytime, became stopped at night. This resulted apparently from the difference in the level of the head when upright and when horizontal, there being a greater tendency for the congested soft tissues to encroach on the air-space in the horizontal than in the upright position.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held in Manchester on April 21st, the President, Dr. Donald, being in the chair. The following specimens were shown:—Dr. W. E. Fothergill: (1) An Umbilical Cord with Knots and (2) a Fœtus showing an Umbilical Vesicle.—Dr. Arnold Lea: An Acardiac Fœtus.—Dr. S. Buckley: A Blood Cyst in connexion with the Fallopian Tube.—Dr. J. S. Martin: Two Ovarian Cysts with Hæmorrhagic Contents removed by Abdominal Section.—Dr. Lloyd Roberts: Tubal Gestation with Intraperitoneal Rupture removed by Abdominal Section.—Dr. W. Walter: An Uterus with Multiple Fibroids removed by Abdominal Hysterectomy.—Dr. W. K. Walls described the Labour in the case of a woman the subject of Uterus Bicornis. The right horn containing the placenta was strongly retroflexed into Douglas's pouch. The os uteri was high up above the symphysis and was reached with difficulty. A hand presented. Delivery was effected by version under chloroform after replacement of the right uterine cornu. During the lying-in period the left cornu also became retroflexed and caused much discomfort from hæmorrhoids. The symptoms were at once relieved by replacement.—Remarks were made by Dr. Sinclair, Dr. Briggs, and the President.—Dr. Walls replied.—Dr. Sinclair read a short paper on Malignant Adenoma of the Body of the Uterus, illustrating his remarks by four cases, specimens and microscopic sections being shown. He also made incidental reference to two cases of malignant adenoma of the cervix, from which preparations were also demonstrated. He mentioned several anatomical and clinical features of this form of malignant disease which appeared to differentiate it from carcinoma. Anatomically it is not distinguishable by the microscope from the benign form, although there is a form of adenoma which from the microscopic evidence alone may be confidently considered malignant. There are cases also usually considered benign on microscopic appearances which are certainly malignant. In support of this opinion sections were shown from a case which had been observed through the stages considered benign until extirpation of the uterus had to be performed for a clearly malignant condition. Sections of the body in this case showed invasion of the muscle by the adenomatous growth. Clinically the chief point dwelt upon was the more chronic course of malignant adenoma as compared with carcinoma. Some minor clinical differences were also said to exist.—Remarks were made by Dr. Briggs, Dr. Fothergill, Dr. Lloyd Roberts, and the President.—Dr. Sinclair replied.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on April 19th, the President, Mr. T. Davies Pryce, being in the chair.—Dr. George Flux (London) read a paper on the Open Method of Administering Nitrous Oxide Gas.[1] Invitations had been issued to many of the leading dentists of the town and a large number were present.—Mr. Blandy, surgeon-dentist to the Nottingham General Hospital, brought a patient on whom Dr. Flux demonstrated his method of producing anæsthesia. The demonstration was completely successful and showed that by this method nitrous oxide gas could be made to induce complete anæsthesia rapidly and without any of the symptoms and signs of asphyxia which were associated with the old method in which air was excluded. Mr. Blandy having extracted the tooth the patient was allowed to come round. She had felt nothing and was not in any way upset on recovering consciousness which occurred in about half a minute.—A vote of thanks was proposed by Mr. Blandy and seconded by Mr. W. Goddard to Dr. Flux for his demonstration of what appeared to be a valuable improvement in nitrous oxide anæsthesia. This was carried unanimously. The remainder of the evening was devoted to the exhibition of cases and specimens. Mr. Martineau showed (for Mr. R. C. Chicken): (1) a patient after operation for Gangrene of the Lung (with notes); (2) a patient after operation for large Popliteal Aneurysm (with notes); and (3) Aneurysm of the Palmar Arch, excised.—Dr. Handford showed: (1) a man with Abductor Laryngeal Paralysis; (2) a man with Myxœdema; and (3) Perforation of the Descending Colon and Perforation of the Small Intestine caused by Enteric Fever.—Mr. A. R. Anderson showed: (1) two Renal Calculi removed by operation; (2) a large Biliary Calculus from the Cystic Duct removed by operation (the gall-bladder was distended with perfectly clear, limpid fluid; after evacuation the gall-bladder was sutured, the abdomen was closed, and recovery was complete and uneventful); and (3) Ruptured Liver caused by a collision between a cyclist and a dray. The dray was nearly stationary and the cyclist was riding at about 10 miles an hour. No external injury whatever was present but the operation showed that the liver was torn right across the upper surface and almost divided into two. Five and a half pints of blood were free in the peritoneal cavity. The hæmorrhage was arrested by sutures and packing but shock and loss of blood proved fatal in spite of the transfusion of saline fluid to the extent of many pints.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—A meeting of this society was held on April 27th, Dr. H. Radcliffe Crocker, President, being in the chair.—Dr. Radcliffe Crocker showed a woman, aged 48 years, with factitious Dermatitis of six years' duration. The lesions, which were more or less angular in outline and in various stages of development, chiefly involved the abdomen, the left arm, the fronts of the thighs, and to a less extent the face; the right arm and back were quite free. It was generally agreed that the lesions were due to some irritant.—Dr. Rufenacht Walters showed a case for diagnosis, a woman suffering from an Eruption which the exhibitor looked upon as a Sebaceous Eczema.—The President considered the condition was a sweat eruption.—Dr. Travers Smith brought a case for diagnosis, a young woman, with Eczema of the Left Nipple. The condition started after suckling and had been present seven months. She had not been under medical treatment. Dr. Travers Smith showed the case from the point of view of possible Paget's disease. The general opinion was that this could be safely excluded and that it was a case of eczema which would get well under appropriate treatment.—Dr. Mouillot (Harrogate) gave an account of a severe Vesiculo-bullous Eruption which followed the application of tincture of arnica to the feet. The patient, a young man, was very ill when first seen. The hands were also involved, as the patient had applied the arnica himself. There were some lesions on the face where the hands had come in contact with it. The bullæ were well-marked on the soles.—The President, Dr. Bowles, and Mr. Dale James gave their experience of the bad effects of arnica applications.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The seventh meeting of the session of this society was held in the Medical Library of University College, Bristol, on April 12th, Dr. J. E. Shaw being in the chair.—Dr. J. E. Shaw showed a patient with the Peroneal Type of Muscular Atrophy.—Dr. Michell Clarke and Dr. E. J. Cave remarked on the case.—Dr. H. Waldo and Mr. W. H. Harsant showed a case of Tuberculous Peritonitis treated by Operation.—Dr. Shingleton Smith, Dr. J. O. Symes, Mr. Paul Bush, Dr. E. H. E. Stack, Dr. F. H. Edgeworth, Dr. Michell Clarke, Mr. J. Ewens, Dr. R. C. Leonard, and Dr. C. Elliott discussed the subject.—Dr. W. C. Swayne showed a specimen of Complete Inversion of the Uterus with Diffuse Sarcoma and Vesico-vaginal Fistula. Dr. W. H. Newnham made some remarks on the case.—Dr. B. Rogers communicated a paper on a case of Thrombosis of the Portal Vein and explained the condition of the numerous specimens illustrating the case.—Dr. T. Fisher and Dr. F. H. Edgeworth discussed the paper.—Dr. E. H. E. Stack showed a recent specimen of Post-pharyngeal Abscess.—Dr. C. Elliott spoke on the subject.—Mr. Paul Bush communicated a paper on Some Peculiar Operation Cases occurring in Lunatics.—Dr. J. H. Sproat mentioned that all the patients entirely recovered from their mental condition.—Dr. H. C. Bristowe, Dr. E. H. E. Stack, and Dr. J. O. Symes discussed the paper.

WIGAN MEDICAL SOCIETY.—A meeting of this society was held on April 27th, Mr. Luther Cooke, President, being in the chair.—Mr. Hugh E. Jones showed and made some remarks on the following cases: 1. Septic Thrombosis of the Lateral Sinus, the case having been treated by Operation and the Injection of Anti-streptococcic Serum. A good recovery was the result. 2. A case of High Myopia treated by Discission of the Crystalline Lens with a good result.—Mr. W. Mitchell Banks gave an address, illustrated by numerous excellent lantern slides, on Ancient and Modern Surgery. The illustrations of cases were exceedingly interesting and were much appreciated by those present.—On the motion of the President, seconded by the Honorary Secretary, a cordial vote of thanks was carried with acclammation to Mr. Mitchell Banks and Mr. Jones, an appropriate allusion being made to the recognition of Mr. Mitchell Banks's worth by his *alma mater*, the University of Edinburgh, in having recently conferred upon him the degree of LL.D., a distinction which was well deserved and one which it was to be hoped he would long be privileged to enjoy.

[1] THE LANCET, Feb. 4th, 1899, p. 295.

Reviews and Notices of Books.

Die Verletzungen des Auges. Von Dr. Med. E. PRAUN, Augenarzt in Darmstadt. Wiesbaden: Verlag von J. F. Bergmann. (*Injuries of the Eye.* By Dr. PRAUN of Darmstadt. Wiesbaden: J. F. Bergmann.) Obtainable from F. Bauermeister, Foreign Bookseller, Glasgow. 1899. Pp. 530.

THIS important monograph excites some surprise in the first instance at its bulk, not unaccompanied by a fear that the author must have resorted to a certain amount of padding. We are bound to say, however, that this is not the case and that its size is due to the conscientious manner in which the author has considered the various kinds of injury, as cuts, lacerations, contusions, burns, chemical lesions, and gunshot wounds of the eyeball; the varying effects which follow injuries according to the particular part implicated, as the conjunctiva, cornea, sclerotic, lens, iris, or retina; the presence of foreign bodies, such as metals, glass, stone, and wood; the effects of lightning and of the electric light; the phenomena of sympathetic irritation and inflammation; and the numerous lesions which may be and have been met with of the accessory organs. There is, in fact, an enormous literature on the subject in journals and hospital reports consisting chiefly of isolated cases or of particular forms of injury. The first tolerably complete monograph was written by Mr. (afterwards Sir) William White Cooper which was excellent at the time it was published, in 1859, and was illustrated by Bagge. About eight years later Mr. George Lawson published his "Injuries of the Eye, Orbit, and Eyelids," and in 1880 Dr. Yvert published his "Blessures de l'Œil." Since then a few treatises or special articles in handbooks have appeared, but

none so comprehensive as the volume before us. The statistics of injuries of the eye have been very carefully worked out. We may take as an example gunshot wounds in war; according to Dr. Praun it has been found that in 99,566 wounds of the body generally there were 860, or 0·86 per cent., of cases of injuries to the eye; of these 860 cases 786 were of the globe, whilst 74 were cases of impaired vision consequent on injury of the cranium or of the brain. The proportion of these wounds is certainly high when those of the superficial area of the eye and its appendages are compared with those of the body generally. Cohn has calculated that the proportion ought to be 0·2 per cent. The differences between the actual and calculated number of cases is probably due to the exposed position of the head and the vulnerability of the eye. Moreover, a lesion which would be regarded as comparatively slight in other regions of the body here produces serious effects. In the Crimean War there were 49 cases of injuries of the eye amongst the English soldiers, which is in the proportion of 0·65 per cent. of other wounds. In the same war there were 595 cases amongst the French, or 1·75 per cent. of all wounds. In the American War of Secession there were 1190 cases, or 0·5 per cent. of all wounds. In the Franco-German War there were 860 cases in the German army and 672 in the French, or 0·86 and 0·31 per cent. respectively of all wounds. In war the left eye is most frequently damaged, in peace the right. Sympathetic ophthalmia was observed to follow injuries of one eye in 99 cases in the Franco-German War. Speaking of injuries of the eye generally, men from the more dangerous character of their occupation are four or five times—Hirt even thinks six times—more frequently injured than women. In cases of clean cuts of the sclera the author recommends the employment of sutures in all cases in which the cut is more than three millimetres in length, but they should be applied with judgment. No puckering should be allowed to occur and the needle should not pass through the whole thickness of the sclera. Chloroform and cocaine should both be used and every care should be taken to avoid large loss of the vitreous humour. A section is devoted to Fracture of the Wall of the Orbit and to Fracture of the Sphenoid Bone in the region of the Orbital Canal, which is shown to be tolerably frequent but rarely symmetrical on the two sides.

As might be expected, a long section is devoted to the interesting subject of Sympathetic Ophthalmia. The recognition of this affection, though often credited to Dr. Mackenzie of Glasgow, seems to have been due to the observation of George Bartisch, who as long ago as 1583, in a work entitled Ὀφθαλμοδουλεία, remarks that "after injury of one eye it may dwindle and the other eye is then in great danger." The affection was noted by other surgeons but their attention was first strongly directed to it by the writings of Dr. Mackenzie in 1844 who propounded a theory in regard to its nature which fairly expressed all that we at present know upon the subject. Considerable differences of opinion still exist on the mode of propagation of the disease, some regarding it as the result of a reflex neurosis through the ciliary nerves, others as the extension of an iridocyclitis or a septic choroiditis along the optic nerves or through veins, or a migration through the lymphatic system. The arguments in favour of and in opposition to these theories are duly marshalled and discussed without any very decided conclusion being arrived at. The interval between the primary lesion and the secondary ophthalmia is stated to be very rarely under three weeks, though it may supervene after many months or years. As a rule the supervention of the sympathetic attack in the sound eye takes place at from four to eight weeks. The clinical forms of sympathetic ophthalmia are given under the heads of iridocyclitis plastica, choroiditis plastica, iridocyclitis serosa, choroiditis serosa, and neuroretinitis sympathica. The author has collected a very large number of cases of foreign bodies in the eye, the substances being of the most varied description, as iron, gold, copper, stone, wood, porcelain, cilia, &c., and he tabulates the results. From these we may gather that to leave the fragment in the eye is usually disastrous, whilst good results are frequently observed after removal of the lens with the foreign body and an iridectomy. We do not find any authoritative statement as to the course to be pursued when a shot has traversed the eye without damaging the iris or lens and is lodged in the orbit. To those of our readers who are conversant with German we commend the book as containing by far the fullest account of injuries of the eye in any book extant in any language. It is excellently printed.

Aids to the Treatment of Diseases of Children (Medical). By JOHN MCCAW, M.D. R.U.I., L.R.C.P. Edin., Senior Physician to the Belfast Hospital for Sick Children. Second edition. London: Baillière, Tindall, and Cox. 1899. Pp. 241. Price 3*s.* 6*d.*

THIS volume forms one of the "Student's Aid Series." It contains a large amount of information in a concise and clear form. It professes to be nothing more than a compilation and as such should prove useful not only to students about to present themselves for examination, but also to practitioners who wish for a small work to refer to in which facts will be found briefly expressed.

The chapter on the Specific Fevers is especially well done, the sections on differential diagnosis being a valuable feature. We would suggest that in future editions the period of quarantine after convalescence should be more clearly given. This is a matter of extreme importance to the patients and their friends, but very few text-books contain the necessary information.

In this edition articles on Sporadic Cretinism, Glandular Fever, Prolapsus Recti, and Paraplegia have been included, and the etiology and pathology of such affections as diphtheria, whooping-cough, infantile paralysis, and pneumonia have been brought up to date in the light of the most recent research; in fact, no pains seem to have been spared to make the volume as complete as possible, at the same time maintaining its character as an "aid."

Diagnosis by the Urine. By ALLARD MEMMINGER, M.D., Professor of Chemistry, Urinology, and Hygiene, in the Medical College of the State of South Carolina. Second edition. Illustrated. Philadelphia: P. Blakiston's Son and Co. 1899. Pp. 124. Price $1.

THIS small volume which possesses rather an ambitious title describes the ordinary clinical methods of examining the urine. We cannot say that we are favourably impressed with the style in which the book is written and we do not think that the student or practitioner will derive much information from its perusal. The usual tests for albumin, sugar, the chlorides, phosphates, &c., are given but they are only such as can be found in any ordinary text-book of medicine. With regard to the tests for albumin Dr. Memminger prefers the "acetic acid and ferrocyanide of potassium" test; this method is certainly reliable but we believe that the busy practitioner may rest assured that if he finds no albumin by the heat and nitric acid test he can for clinical purposes rest assured that there is no albuminuria. Dr. Memminger's method of performing the latter test is peculiar as he considers it necessary to plunge the test-tube twice into cold water during the process, thus needlessly prolonging it.

The description of the urinary deposits is very brief and the consideration of their clinical signification is greatly lacking in detail.

The author's chief endeavour has been to attempt to establish a "differential diagnosis of chronic Bright's

disease as based on a classification of the normal absolute, the absolute, and the relative absolute of solids and urea." This proposition is somewhat involved and although Dr. Memminger makes praiseworthy efforts to render his meaning clear we do not think that he succeeds in so doing. His definition of "chronic Bright's disease" is a bad one, for he says: "I include, then, under and in this category the large white kidney, the small granular kidney, the small granular and fatty kidney, and finally the amyloid or waxy kidney." The pathology of these conditions is so diverse that to attempt to place them all under one head for clinical purposes is absurd, although the author maintains that interstitial nephritis "is frequently a natural consequence of the chronic secondary parenchymatous variety." The whole tone of the book illustrates the many errors which may arise from looking at disease through a test-tube rather than by studying it at the bedside.

Der Kolpeurynter seine Geschichte und Anwendung in der Geburtshülfe. (The Colpeurynter: its History and Employment in Midwifery.) By Dr. RUDOLF BIERMER. With Eight Illustrations in the text. Wiesbaden: J. F. Bergmann. 1899. Pp. 69. Price 2*s.* 6*d.*

THIS work contains an account of the author's experience with the Colpeurynter in 23 cases at the Frauenklinik at Bonn and the conclusions he has arrived at as to its advantages and disadvantages.

After a historical sketch of the development of the instrument Dr. Biermer proceeds to consider the special indications for its use. Amongst these the most important is the induction of premature labour in cases of contracted pelves. The author, however, still regards Krause's method as the best and resorts to the use of a hydrostatic bag only when the bougie takes too long to initiate pains or when it is necessary to terminate the labour rapidly. With this view we entirely agree, as in large numbers of cases the bougie undoubtedly gives the best results as regards the children. If the cervical canal is sufficiently patulous the practice at Bonn is to place the hydrostatic bag in the uterine cavity, otherwise it is placed in the vagina. It is a matter of indifference what particular kind of bag is employed, but Champetier de Ribes's or one like it is the best, and after its introduction into the uterus slight intermittent or constant traction can be exerted upon it until it is expelled.

In 16 cases of the induction of premature labour 12 children were born alive, of whom 11 left the hospital alive; all the mothers made a good recovery and 12 passed through a puerperium free from fever.

Dr. Biermer has also employed a hydrostatic bag in two cases of acute nephritis, but in eclampsia he would restrict its use until after the employment of all other available means of treatment. In two cases of pneumonia the use of the bag rapidly terminated labour, but one of the mothers and the child were lost as the result of rupture of the uterus occurring during extraction. This unfortunate result was in no way due to the employment of the bag. In a bad case of accidental hæmorrhage the introduction of a hydrostatic dilator into the vagina was followed by the onset of vigorous pains, the prompt arrest of the bleeding, and the birth of a living child. The author has not used the bag in any case of placenta prævia, but would do so and thinks that its employment holds out a prospect of good results.

His final conclusions are that the colpeurynter used in the vagina or in the uterus with or without constant traction is a very efficient and safe method of producing rapid dilatation of the cervix and marked contractions of the uterus. The most important indication for its use is the induction of premature labour in contracted pelves, but it should also be employed in any case where grave danger to the life of the mother calls for a rapid termination of labour. The hydrostatic dilator is an instrument which can be used not only in lying-in institutions, but also by the general practitioner and should form a part of every obstetric outfit.

LIBRARY TABLE.

The Natural Waters of Harrogate. By FRANCIS WILLIAM SMITH, M.D. Aberd. London: Dawbarn and Ward. 1899. 8vo, pp. 101. Price 1*s.*—Harrogate is so much visited by, and so useful to, invalids and those temporarily out of health that it is not surprising to find new medical works fairly frequently appearing on the much-discussed but important theme of the action and therapeutic uses of its various mineral waters. Dr. F. W. Smith's book likewise contains meteorological notes and remarks on the climate and sanitary arrangements of the Spa with a new analysis by Mr. Charles F. Townsend of the six wells mostly in use for medicinal purposes. According to the new analysis the "old sulphur well" contains 16 cubic inches of sulphuretted hydrogen in the gallon (Thorpe's analysis in 1875 gave only 10·16 cubic inches) and the strong Montpellier sulphur water, which according to Attfield's analysis contains none of this gas, is found by Mr. Townsend to contain 11·5 cubic inches. Short notes on the chief affections treated at Harrogate are given and there is an account of the superheated air methods for rheumatoid arthritis, gouty conditions, &c.

Atlas der Haut-Krankheiten, mit einem Grundriss der Pathologie und Therapie derselben. (Atlas of Diseases of the Skin, with Outlines of their Pathology and Therapeutics). Von Professor Dr. FRANZ MRACEK in Wien. With 63 Coloured Plates and 39 Uncoloured Illustrations. München: J. F. Lehmann. 1899. Price 14 marks.—We have on several occasions expressed our appreciation of the excellent series of "Hand Atlases" published by J. F. Lehmann. This volume maintains the excellence of its predecessors. The coloured plates are true to nature and most beautifully executed. The illustrations of the various forms of erythema, for example (erythema multiforme, erythema bullosum, erythema contusiforme et papulatum), show extremely well the usual appearances of these conditions and will enable the student to refresh his memory after not having seen them for some time, or the whole matter will form a most valuable work to refer to should he meet with any condition of the skin with which he is unacquainted. The description of the various diseases is also good. Doubtless an English translation will shortly appear and so render it more convenient for those English readers who are not sufficiently acquainted with the German language to enable them to read the original work with advantage.

Revue de Gynécologie et de Chirurgie Abdominale. March, April. 1899. Paris: Masson et Cie. — This number contains the following original articles:—1. 50 cases of Marriages concluded between Persons of the same Sex, by M. Fr. Neugebauer. 2. Hypertrophy of the Anterior Tubercle of the Vagina simulating Hermaphroditism, by M. de Sinéty. 3. Primary Epithelioma of the Fallopian Tube, by M. H. Duret. 4. Severe Forms of Moveable Kidney and its Treatment by Nephropexy, by M. P. Bazy. 5. An Anatomical Study of the Appendix and the Ileo-cæcal Region, by MM. Tuffier and Jeanne. 6. On Entero-rectal Anastomosis, by M. Henri Lardennois. The usual analysis of current literature concludes the number.

Annales de Gynécologie et d'Obstétrique. April, 1899. Paris: Steinheil.—This number contains the following articles. 1. Retention of Urine as the Result of Constipation due to Pregnancy, by Professor Alphonse Herrgott. 2. Cæsarean Section necessitated by an Intraligamentous Dermoid Cyst, by Professor Herrgott. 3. Radiography of

the Pregnant Uterus, by Professor Varnier. 4. Some Remarks on Three Cases of Total Abdominal Hysterectomy, by Professor Hartmann. 5. Bacteriological Researches on some Cases of Retention of the Placenta and Suppuration of the Genital Tract, by J. Hallé. The usual tri-monthly bibliography concludes the number.

Analytical Records FROM THE LANCET LABORATORY.

NEW TABLOIDS.

(BURROUGHS, WELLCOME, AND CO., SNOW HILL BUILDINGS, E.C.)

SOME recent additions to the list of tabloids are worthy of note. As an aid to the diagnosis of corneal lesions fluorescein has recently come to the front, inasmuch that while the normal cornea is not stained by a solution of this substance ulcers or parts free from epithelium become green and remain so for a few hours. Further, fluorescein is soluble in the lacrymal secretion and is free from irritating properties. Fluorescein is a brilliant green fluorescent substance when in solution, and for the diagnostic purposes just mentioned nothing could be more convenient than the tabloid which is issued of a strength of $\frac{1}{100}$ grain. Tabloids of krameria and cocaine contain an admittedly useful combination in the treatment of sore throat and irritable conditions of the pharynx. The astringent as well as tonic properties of rhatany coupled with the sedative action of cocaine render this combination particularly useful and therapeutically effective. In tabloid form, too, some advantage is gained over the ordinary lozenge which of necessity contains an excipient of no direct therapeutic value. A somewhat new departure is the preparation of tabloid B P. pills, each representing in dosage and active ingredients the corresponding pill of the British Pharmacopœia, 1898. We have examined the tabloid containing aloes and iron (gr. 4) and the tabloid colocynth co. (gr. 4) as examples. But the list also includes well-known combinations, as aloes and myrrh, blue pill, colocynth and hyoscyamus, ipecacuanha and squill, lead and opium, and rhubarb co. Judging from the ready way in which the compressed tabloid breaks up in water the therapeutical effects of the drugs contained in them are sure to be gained.

SHERRIES: (1) PANDO; AND (2) CELESTINO.

(BERRY BROTHERS AND CO., 3, ST. JAMES'S-STREET, LONDON, S.W.)

The samples submitted represent the two types of sherry known respectively as "fino" and "oloroso." The results of analysis were as follows. Pando: alcohol, by weight 13·31 per cent., by volume 16·43 per cent., equal to proof spirit 28·78 per cent.; extractives, 1·89 per cent.; mineral matter, 0·44 per cent.; potassium sulphate, 0·37 per cent.; sugar, 0·20 per cent.; tartaric acid, 0·36 per cent.; acetic acid, 0·10 per cent.; alcohol in volatile ethers 0·021 per cent., alcohol in fixed ethers 0·031 per cent., total alcohol in ethers 0·052 per cent. Celestino: alcohol, by weight 17·25 per cent., by volume 21·19 per cent., equal to proof spirit 37·13 per cent.; sugar, 4·00 per cent.; tartaric acid, 0·34 per cent.; acetic acid, 0·08 per cent.; mineral matter, 0·58 per cent.; potassium sulphate, 0·424 per cent.; alcohol in volatile ethers 0·0227 per cent., alcohol in fixed ethers 0·0307 per cent., total alcohol in ethers 0·0534 per cent. These figures indicate the individual characters of the two wines. Thus Pando is a pale, delicate, dry wine with comparatively low alcoholic strength. It is a "brut" wine and has probably been matured for some years, judging from its delicate ethereal flavour. The wine evinces distinct quality, is free from excessive acid, and contains practically no sugar. On the other hand, Celestino is somewhat sweet and nearer in alcoholic strength to that of port. It is a very agreeable after-dinner wine, in which vinous flavour is well developed. The amount of sulphate of potassium present shows that the treatment with sulphate of lime has been kept within satisfactory limits.

EUCALYPTUS CITRIODORA OIL.

(LANGTON FORT AND CO., 20 AND 21, ST. DUNSTAN'S-HILL, E.C.)

According to fractional distillation this oil contains about 75 per cent. of pure citronellon which has a boiling point ranging between 205° and 210° C. It is a clear colourless oil with a very delicate and pleasant odour. The odour calls to mind that of the variegated geranium leaf. It turns semisolid with phosphoric acid and a similar reaction takes place on the addition of bisulphate of soda. The oil has been proved to be a powerful antiseptic and to many persons is much more agreeable than the better known variety, eucalyptus globulus. It may be used for the relief of colds and other respiratory trouble and as a pleasant antiseptic for general purposes.

DRY SPARKLING WINE.

(THE VINEYARD BASKET CO., LTD., 22, BREWERY-ROAD, CALEDONIAN-ROAD, N.)

This is probably a grape-juice product, judging from the results of analyses which we obtained and which are as follows: alcohol, by weight 8·64 per cent., by volume 10·73 per cent., equal to proof spirit 18·81 per cent.; sugar, 0·23 per cent.; tartaric acid, 0·34 per cent.; acetic acid, 0·68 per cent.; extractives, 4·52 per cent.; and mineral matter, 0·18 per cent. The wine is agreeably sparkling and at first not disappointing in general character and flavour. Of course, this wine does not possess in an equal degree those peculiar qualities which characterise the choice sparkling wines as produced in the Champagne district. The wine soon loses brilliancy and at this stage its flavour is quite indifferent.

LOZONE.

(THE COMMERCIAL OZONE SYNDICATE, 31, LOMBARD-STREET, E.C.)

Lozone is a slightly opalescent fluid containing, in addition to peroxide of hydrogen, terpene oxidation compounds, as the result of the oxidising action of peroxide of hydrogen on essential oils of the turpentine class. On analysis we found that lozone yielded just over one-half per cent. of a resinous oil possessing a smell like that of camphoric acid. The solution contained peroxide of hydrogen and 0·85 volume of available oxygen per volume of the fluid. Peroxide of hydrogen is by no means a stable body, but the presence of oxygenated terpenes adds materially to its stability. Lozone is therefore practically permanent and possesses in the same degree the well-known antiseptic properties of peroxide of hydrogen of a similar strength. Peroxide of hydrogen, it is stated, will sterilise water infected with cholera and typhoid bacilli when added in the proportion of 70 grammes to the gallon.

NAFTALAN.

(A. AND M. ZIMMERMANN, 9 AND 10, ST. MARY-AT-HILL, E.C.

The preparation naftalan is a brownish-green oleaginous compound devoid of smell and reaction. On treatment with hot water a greenish-brown oil separates which we find is naftalan proper, while in the solution soap is easily recognised. In short, the ointment contains about 97 parts of a peculiar, crude naphtha which is made into the consistence of an ointment by the addition of soap. The crude naphtha itself is found in the Caucasus and from this raw product naftalan is extracted. It appears to be readily absorbed by the skin and to serve as an excellent vehicle for the application of antiseptic preparations such as mercurial salts. Alone, naftalan is decidedly antiseptic and cases are reported in which it has proved effectual in the treatment of chronic eczema. While the ointment is fairly stiff it

can be easily smeared. It is very resistant to change and does not become rancid or easily undergo oxidation. Encouraging accounts are given of its application alone and combined with antiseptics, chiefly in dermatological practice, and it would appear to merit a place amongst new remedies worthy of trial in this connexion.

L'EAU D'OREZZA.

(MARK WHITWILL, SON AND JUDGE, 6, ST. HELEN'S-PLACE, E.C.)

This water is bottled at Orezza in Corsica and the distinctive constituent is iron in the unoxidised condition. It contains a slight excess of carbonic acid gas and is inky to the taste. We found on analysis that it possessed the following composition: sodium carbonate, 0·65 gramme per litre; common salt, 0·21 gramme per litre; protocarbonate of iron, 0·034 gramme per litre (or 2·38 grains per gallon). The water is therefore of a tonic character referable to the iron which is enhanced by traces also of manganese and arsenic. In the literature on the subject, which is somewhat extensive, cases of chlorosis and anæmia, &c., are recorded in which distinct benefit was received.

EXTRACT OF BEEF AND TOMATO (CORAZZA).

(L. CORAZZA, 20, VILLIERS-STREET, STRAND, W.C.)

This preparation affords a very useful means of rapidly preparing an excellent soup. It contains in part the nutrient constituents of beef as well as the stimulating principles. To those who like the flavour of the tomato the soup will be acceptable. The tomatoes employed were evidently in sound condition, the flavour of the soup giving distinct indication of this fact. We could trace no objectionable preservatives or metallic contamination.

HYDROCHLORIDE OF HEROIN.

(THE BAYER CO., LTD., 19, ST. DUNSTAN'S-HILL, E.C.)

In our issue of Nov. 19th, 1898, we described the new morphine derivative "heroin." A drawback to its use in subcutaneous injection is its insolubility in water. A neutral and soluble salt has therefore been prepared in the form of hydrochloride of heroin. It is a white crystalline powder easily soluble in water and also in alcohol, the solution being neutral in reaction, and perchloride of iron is without effect upon it. So much has been said in favour of heroin as a morphia substitute that it promises to become largely employed in medical practice.

CHOCOLATE-COATED TABLETS.

(PARKE, DAVIS AND CO., 21, NORTH AUDLEY-STREET, W.)

A very complete list of medicaments contained in chocolate-coated tablets is now prepared by this firm. The method possesses some advantages, chief among which are the masking of the unpleasant taste of certain drugs, the protection of the drug against the deteriorating action of the air, and an attractive appearance. Over 100 simple and compound formulæ are prepared this way. The specimens which we examined were: (1) corrective (infant); (2) cubeb compound; (3) calomel and sodium bicarbonate; and (4) hepatic.

BLACKBERRY GIN.

(CHARLES WRIGHT AND SON, WIRKSWORTH AND LONDON.)

This preparation is of the nature of a liqueur and possesses as a novel characteristic the peculiar and delicate flavour of the blackberry. It is dark-red in colour and somewhat syrupy. On analysis the following results were obtained: alcohol, by weight 19·67 per cent., by volume 24·08 per cent., equal to proof spirit 42·20 per cent.; sugar, 12·00 per cent.; other extractives, 0·63 per cent. As might be expected, it contains the tannin and extractives of the blackberry, so that it possesses a slightly but pleasantly astringent quality. The preparation is an agreeable departure from the ordinary class of liqueur.

New Inventions.

AN INSTRUMENT FOR MEASURING FOR TRUSSES.

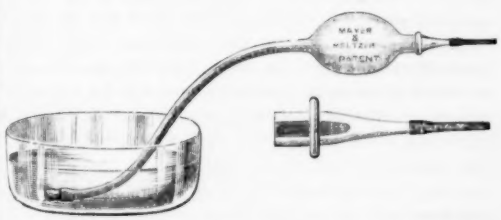
THE object of this instrument is to supply medical practitioners with a ready and accurate means of ascertaining the dimensions necessary for fitting a truss. This is accomplished by a very simple application of the pneumatic principle to the pads of a truss, the spring of which is divided into two parts joined together by a thumbscrew and furnished with a series

of indexes which on adjustment will indicate the required dimensions. The accompanying illustrations show the general appearance and arrangement of the instrument, which has been manufactured to my specification by Messrs. Arnold and Sons of West Smithfield.

THOMAS J. KELLY, Lic. Med. T.C.D., L.R.C.S. Irel.
Enniscorthy, Wexford.

ASEPTIC AURAL AND NASAL SYRINGE FOR SELF-USE.

OWING to the fact that the ordinary ear syringe can only be filled through the nozzle, maintenance of its asepticity is almost impossible, while the difficulties attending its self-use are so many that efficient irrigation in cases of chronic ear discharge is beyond the reach of those patients who cannot obtain assistance. Messrs. Mayer and Meltzer have constructed for me a simple arrangement which ensures cleanliness of the syringe and facility in self-use. The syringe consists of a conveniently shaped ball, fitted with a glass nozzle, guarded by a valve *opening outwards*, so preventing filling by that aperture. The reverse end is furnished with a length of rubber tubing



guarded by a valve opening *inwards* to permit filling by suction, on the principle of an enema. Cleanliness is further ensured by the use of a renewable short piece of soft rubber tubing on the nozzle, which further affords protection from injury when the user is not expert. The ball arrangement will be found more convenient for self-use than the piston form of syringe, since a patient can not only thoroughly irrigate his own ear, but has at the same time complete control over the current, as regards force, quantity, and direction. It is equally serviceable as a nasal douche.

Devonshire-street, W. WYATT WINGRAVE.

THE LANCET.

LONDON: SATURDAY, MAY 6, 1899.

THE discord of the members of the Licensing Commission as exemplified by the issue of both a majority and a minority report, the substance of which was given in the *Times* of May 1st, threatens to be a public misfortune. The responsibility for this state of matters must be divided between the members themselves and the Government which created the Commission, consisting as it did of three different sets of persons—eight members representing trade interests, eight representing temperance views, and eight neutral members of whom the distinguished President is supposed to be one. A body more likely to disagree or to produce a report or reports which would give Ministers an excuse for letting things alone could not well have been constructed. The enemies of the Ministry will not be slow to draw the conclusion that this was the intention of the Government in giving such a constitution to the Commission. We shall not say anything so dishonourable to a Government which includes many members who know how deeply the evils of drunkenness affect the families of the country and the whole tenour of life and morals. But the matter must not be allowed to rest where it is. If Royal Commissions cannot come to definite conclusions on such vital questions then other means of reaching such conclusions must be found. The absence of Lord PEEL from the meeting of the Commission on May 2nd cannot fail to deprive the report of the majority of the weight that might otherwise attach to it. We are in no way concerned to defend his lordship from the criticisms which his action has called forth. He may have been somewhat impatient of difference of opinion but he would have been more than mortal had he been able to obtain a practically unanimous report from members differing so acutely as those constituting the Commission did in interests and in opinion. When the inevitable tie in divisions came the only thing to be done was to meet it with the casting vote of the Chairman. Lord PEEL'S neutrality on the questions under discussion and his unprecedented education in impartiality must, till the contrary is shown, be sufficient proof that the evidence justified him in the course which he took and those who voted with him in the conclusions to which they came.

The public will be struck with one feature of both reports, the absence of any extreme or sensational suggestions. This moderation of suggestion is in places positively disappointing. Perhaps the attitude of both the majority report and that of the minority towards the question of grocers' licences is the best illustration of this. We do not pretend to have seen all the evidence on this subject. But there are few parts of the question on which there is a greater consensus of opinion among the public and, we may add, among the members of the medical profession, than there is with regard to the subtle evil done by grocers' licences which are now being applied for wholesale. It is understood, too, that druggists are turning their attention to the ease with which these licences can be obtained and that some of them are applying for licences to sell spirits, not for medical use, but in candid competition with grocers and confectioners. This opens up the prospect of an indefinite and untraceable extension of the liquor traffic with consequences of demoralisation and disease which only medical men can fully estimate. Neither in the majority report nor in that of the minority is this system condemned. Indeed, the only suggestion on the subject at the time of our writing is that in the majority report it is recommended that grocers' licences should be placed under the control of the licensing authority instead of being, as at present, merely excise licences, the justices having no control. Another instance of the wonderful restraint of the members of the Commission is to be found in the guarded language with which they express their doubts as to the increase of drunkenness. This is remarkable in view of the recent statement of the Chancellor of the Exchequer as to the unprecedented consumption of beer, the admitted increase in the drunkenness of women, the prodigious sum spent last year on drink in all forms—£154,000,000—and the increase shown by the Registrar-General in mortality from diseases caused by alcohol. There is doubtless a decrease in coarse drunkenness and there are large classes of the community who abstain totally from alcohol in all forms. But this only makes the conclusion more inevitable that the drinking of the others is on a great scale and, to use the words of the majority report, is a "gigantic evil to remedy which hardly any sacrifice would be too great."

Though the reluctant and restrained admissions of these reports are very noticeable we are ready to allow that in both reports there are some good suggestions. The hours of Sunday drinking in England, it is recommended in the majority report, should be curtailed to two in the morning and two in the evening, but even here the restraining influence appears and large cities are excepted. The majority report has some good suggestions under the head of "Offences." It proposes in some cases temporary suspension of licences instead of fines; that the plea of ignorance in permitting drunkenness, as in serving a drunken person, should be inadmissible; and that "habitual drunkards" after certain proofs should be declared such by a court of summary jurisdiction and publicans should be prohibited under a penalty from serving them. In licensing administration it is recommended that full magisterial control should be extended to all "off" wine and spirit and retail licences. Though both the majority and minority reports are against local veto that of the minority recommends that the licensing authority should consist of from six to 10 members, half chosen by the justices from their own number and half by the county or town council, and that the appeal court should be composed on a similar principle. There are two great powers in the present licensing system, that of the police and that of the magistrates. The reports contain no criticism of the police supervision of the trade, though it is a grave question how far it is satisfactory. This

is not the place to discuss the subject of compensation for the extinction of licences which is wanted on an enormous scale if the supply is to be proportional to the reasonable wants of the people. But we believe that Lord PEEL is right in his main contention that a time notice, coupled with a moderate money compensation to be paid out of licence rentals, would meet the equitable claims of the publicans. Our final remark is that it will be a discredit to the Commission and to the Legislature if all this inquiry is to go for nothing. There are good points in both reports and unless there is an almost criminal conspiracy among politicians to leave the question alone for political reasons much valuable material may be got for new and effective legislation in connexion with the evidence supplied to, and the conclusions arrived at by, the members of the Commission.

SOME of the most important services rendered by members of the medical profession to the State are by a strange anomaly performed gratuitously or are so inadequately remunerated as to constitute a very real grievance. The duty of certifying to the cause of death, often a most responsible one, involving when done conscientiously the occasional loss of the deceased's friends as future patients, is, so far as the State is concerned, perfectly gratuitous. Instances could be multiplied where its refusal and a reference to the coroner has led to the detection of manslaughter or even murder, while a certificate given unwisely from a dislike to appear disobliging has led to the concealment of unfair play. But the fact is too well known to need illustration. Again, in the police, the sessions, and the assize courts the remuneration of medical witnesses is most inadequate. In the first it is only half a guinea a day when the police-court is within two miles of the medical witness's residence, one guinea when the distance is beyond two miles (though this latter increased fee is not so well recognised as it ought to be); these are when the case is committed for trial to the sessions or assizes. When the case is disposed of summarily by the magistrate the medical witness, especially if the case be a country one, receives no fee at all. At sessions and assizes the fee is one guinea per day only. The grievance is specially great on general practitioners. Even when the medical witness resides in or near the town or city where the sessions or assizes are held the inconvenience is very great, for he must give up attendance on his patients to attend court at an early hour, and he may be detained in court all day, and day after day, attending to his private practice early in the morning or late in the evening, receiving as his recompense for loss of time this very inadequate payment of one guinea per diem. Frequently the strain of an assize or sessions case has been too much for the medical witness, resulting in serious illness. But it is when the general practitioner resides at a distance from the county town or city that the hardship is most keenly felt, for he must not only leave home by an early train, but must be absent for days, and even for nights, leaving a locum tenent in charge, and it is no figure of speech, but a stern fact, that so far from being remunerated he is actually out of pocket by having to attend the assizes or sessions. On police surgeons this duty involves especial hardship. Assaults of a serious nature on police officers are very frequent and the surgeon who has been in attendance from the first is an indispensable witness. In addition to these there are cases of rape and criminal assaults in which the police surgeon is often required to examine both the complainant and the accused with the subsequent duty if the case be well-founded of attending the police and assize courts. A case has been brought to our notice in which the police surgeon in a country town with 18,000 inhabitants and four general practitioners in addition to himself is practically compelled to take these very repulsive cases because the other practitioners decline to do so. The assize city is more than 20 miles distant, and the police surgeon very naturally contends that the fee of one guinea per diem is wholly inadequate to reimburse him for his loss of time and professional services. In addition to this there is an entire absence of uniformity as to mileage, railway fares, and the allowance of two shillings per night. Too often the medical witness has to pay hotel and other expenses out of his miserable pittance of one guinea per diem.

More than four years ago a deputation from the United Kingdom Police Surgeons' Association was received by Mr. ASQUITH (then Home Secretary) when the matter was brought prominently to his notice. While courteously receiving the deputation and freely admitting this grievance of medical witnesses he could not promise any remedy. The scale of fees had been fixed by Sir GEORGE GREY when he was Home Secretary many years ago and though the matter had been brought repeatedly before Sir GEORGE GREY'S successors and his (Mr. ASQUITH'S) predecessors none of them wished to take the matter in hand, while he felt equally unwilling to burn his fingers in the matter. He suggested that municipal and county councils should take the matter into consideration when fixing the salaries of police surgeons. Such a shifting of responsibility from one authority to another—such a proposed veritable robbing of Peter to pay Paul—was more worthy of the clever advocate than of the responsible Cabinet Minister. Those who require these witnesses—i.e., those who conduct the prosecutions—are undoubtedly those who ought to pay them, and the scale of fees should not be so low as to deter medical practitioners from wishing to be witnesses. Sir MATTHEW WHITE RIDLEY has shown a still greater reluctance to incur the finger-burning process as he has declined to receive another deputation from the same Association on the grounds that it would serve no useful purpose.

But the matter cannot rest where it is. Many years ago, as related by the late Dr. ALFRED SWAYNE TAYLOR, a jar containing a human stomach and its contents with other viscera was hawked about to every metropolitan medical school in search of someone who would undertake the toxicological examination which was considered necessary, but each and all of the lecturers on chemistry and toxicology declined to undertake the responsible duty for the paltry fee of two guineas which was all that the coroner could offer. This and other circumstances led to the appointment of Government analysts attached to the Home Office who, it may be assumed, are remunerated on a much more liberal scale, proportionately with the quantity and quality of their work. Even the increased fee of five or ten guineas per diem given to experts in Treasury cases and

to surgeons in the higher courts and before Parliamentary Committees does not err on the side of liberality. To all in private practice the minimum fee should be at least two guineas a day, with liberal allowances for travelling and hotel expenses to those residing at a distance from the town or city in which the assizes are held.

WE have seldom read a more simple and lucid exposition of a scientific subject intended for popular information and guidance than that contained in a small pamphlet by Mr. E. H. Hankin on Bubonic Plague.[1] It forms, in reality, a little narrative or miniature treatise succinctly setting forth the medical history of plague and affords an excellent example of the way in which such subjects should be treated when the object is to convey information and to carry conviction to the minds of reasonable and intelligent people who have no special or technical knowledge to guide them beyond that which they are supposed to bring to bear on the various questions which they have to decide daily in the conduct of life. The history of plague in the past up to its occurrence in India at the present time is briefly and pertinently traced; the gradual growth and development of the doctrines which have prevailed in regard to its nature and the causes of its prevalence, as we have slowly emerged from ignorance and been emancipated from the superstitious fears and occult science of past times, are narrated; and the results of the light which more precise methods of studying nature's procedures with the scientific aids of modern research and discovery have thrown upon such investigations are briefly but lucidly stated. Theories and hypotheses are wisely avoided; the facts are allowed to speak for themselves. As Professor HAFFKINE says in his short preface to the pamphlet in question, the need of a popular account of plague at the present time is patent, for much of the opposition to all restrictive measures on the part of the natives of India is attributable to their ignorance of the danger against which the Government and the medical services are trying to guard them. The pamphlet is not an official publication; it makes no reference to what the Government might or might not do on the occurrence of plague.

The current belief in the East is that plague is due to *kismet* and that a man can no more protect himself from plague than from earthquake. Mr. HANKIN'S object, on the other hand, is to carry conviction to the native mind that plague is not due to any unavoidable accident, but to causes which can be actually avoided. He skilfully illustrates this point by describing the disease as it exists in the Gurhwal hills in the Himalaya mountains where the inhabitants understand its nature and without help from the Government adopt the necessary precautions for their safety; and he follows this up by appealing to the sacred works of the Hindus and quoting from the *Bagarathi Purana* a very interesting passage in which directions are given as to the course of conduct to be followed in time of plague. The passage quoted from one of the most ancient sacred books of the Hindus is a lengthy one. It shows that the liability of rats to be attacked with the disease was clearly recognised and the evacuation of the house by its occupants under such circumstances was enjoined. "On the moment rats fall from the roof above, jump about and die, they (the occupants) will at once leave their houses with their friends and relations and will go to a plain." The description shows, as Mr. HANKIN says, the rats falling from their nests in the roofs of thatched houses, jumping on the floor and dying, exactly as occurs to-day in plague-infected villages. But it is significant that the injunctions laid down, notwithstanding that they are mixed up with those appertaining to superstition and ignorance, foreshadow many of the procedures recommended at the present time when our knowledge of the causes, nature, and spread of plague is far more precise than could possibly have then been the case. In his explanatory comments Mr. HANKIN shows how the religious practices enjoined upon the Hindus necessitated their taking off their clothes, daily bathing, the burning of incense (fumigation) in the presence of friends, relations, and servants, the returning to the infected houses after some interval of time and under ceremonies and conditions which, according to Hindu custom, entail a general washing of clothes and linen and purification of the house.

As we have already stated in previous articles dealing with the Bombay epidemic, plague is not an unknown disease in India. In addition to its recent history in the Gurhwal hills already referred to outbreaks of that disease have been recorded, such as the Gujerat Plague of 1812–21 and the Pali Plague of 1836–37. As regards the cause of the disease we know that Dr. KITASATO, who was sent by the Japanese Government to Hong-Kong to study the disease when it prevailed there, discovered the microbe on which it depends and that Professor HAFFKINE carried out a series of cultivations and demonstrated the curious property of these microbes to form what he termed a stalactite growth in broth and the greatly increased growth of the plague microbes by the addition of a small quantity of ghee or butter to the soil in which they are cultivated. That KITASATO'S microbe is veritably and indeed the cause of plague does not admit of any doubt. The occurrence of the outbreak of that disease at Vienna in connexion with the sample of the plague bacillus brought from India by the Austrian scientific commission more than a year before afforded proof of so conclusive a nature as to amount to a demonstration of the fact. Mr. HANKIN in the two last chapters of his pamphlet brings to a practical focus his observations on plague in the way of what can be done for its prevention and what to do when plague threatens. Infectious diseases are not caused by mysterious or supernatural agencies against which no precautions can be taken. Instead of being dependent upon the infinitely great they are caused by the infinitely little—namely, pathogenic micro-organisms. It is in reality a conflict between men and microbes in which reliance can only be placed on the application of those general principles which have been found most efficacious in checking the spread of infections in general. In the case of plague we have first of all to recognise that we are

[1] The Bubonic Plague, by E. H. Hankin, M.A., late Fellow of St. John's College, Cambridge, Chemical Examiner and Bacteriologist to the North-West Provinces and Oudh and to the Central Provinces of India. With a Preface by Professor Haffkine, C.I.E. Allahabad: Printed and published at the Pioneer Press. 1897.

dealing with an infectious disease attributable to a specific living agent and to act accordingly. Prompt evacuation of an infected house or locality, the free use of disinfectants, and recourse to the system of protective inoculation introduced by Professor HAFFKINE are measures at our command. Like other epidemic infectious diseases plague has a self-limited existence during which the extent of its development and fatality will greatly depend upon the presence of insanitary conditions favourable to its growth and spread; it has its seasons also of activity and dormancy, and it is during the latter periods that time is afforded to us to effect those public health measures which are not only our best safeguards against the spread of this but of other epidemic diseases in general when introduced among a population. In all that is done or proposed to be done in these respects it is of obvious importance that the Government should, as a matter of public policy, carry the people with them as far as possible, and herein lies the value of Mr. HANKIN'S work.

Annotations.

"Ne quid nimis."

THE MEDICAL MAN AND THE ADVERTISER.

THE judgment of the Court of Appeal in Dockrell *v.* Dougall refusing to restrain the defendant by injunction from using Dr. Morgan Dockrell's name to puff a mineral water called "Sallyco" is not so difficult to account for on a careful reading of the case as would at first sight appear. Dr. Dockrell had admitted in his evidence that he did in fact, in an interview which he must now regret, say to the defendant, "Nothing seems to have done my gout so much good," and, as Lord Justice Romer pointed out, he had not denied that he had recommended "Sallyco" to his patients, consequently he did not allege that the defendant's advertisement contained what was untrue, but had to rely upon the contention that the use of his name to advance the sale of a proprietary preparation was unauthorised and calculated to injure him in his profession. Even this point, however, does not seem to have been left to the jury at the trial in the form of a definite question for their consideration. They were asked two questions only by Mr. Justice Ridley who tried the case; first, "Was the matter complained of libellous?" and secondly, "If libellous, was it true?" Neither question seems strictly applicable to the facts alleged, but that the jury should answer the first in the negative was not altogether a surprising result; the second, apparently as a consequence of their doing so, fell to the ground; and on what was a finding for the defendant upon the issue raised the court could not grant an injunction to restrain the act complained of. That the advertisement or, at all events, publications of a similar nature might be so presented to a jury that a different result would ensue was clearly in the mind of Lord Justice Vaughan Williams who while agreeing with his brethren that on the finding of the jury in the case before them there could be no injunction, added in giving judgment, that their decision must not be[1] "taken to amount to this—that an advertiser of the class of advertisements to puff quack medicines which were so intolerably frequent in every paper one took up had a right to use the name of an eminent physician without authority for the purpose of puffing his quack medicine. He wished most emphatically to say that was not the decision of the court. On the contrary, it seemed to him that in most cases if the facts were properly alleged and properly relied upon the unscrupulous advertiser would find he had been guilty of an actionable wrong, and if the matter went before twelve of his fellow-countrymen he would have to pay for it very severely. In his opinion the plaintiff had entirely failed to prove that there had been anything but a user of his name without his authority by the defendant." We can only add that members of the medical profession will be well advised if they keep owners of proprietary medicines at rather more than arm's length and that Dockrell *v.* Dougall should be carefully considered before the evidence in any similar case be laid before a jury.

[1] Standard, April 27th, 1899.

SIR HENRY ACLAND AND MEDICAL MISSIONS IN RELATION TO OXFORD.

WE have already noticed the first edition of an address on the above subject by Sir Henry Acland. It will be gratifying to all his friends who know his life-long labours for the promotion of the health and happiness of mankind to learn that in spite of the infirmities of age he has been able to publish a second edition of this address. The preface to this edition shows with what warmth of enthusiasm he seeks to import into the mission work of the future all that is best in medical science. He makes an irresistible appeal to rich men and companies to found in Oxford a perfect institution for instruction in sanitary science in order to aid by her best students the medical work of India which is so essentially Christian as well as scientific in its character. He is only confirmed in this enthusiasm by the intelligence which he has received of a movement in Bombay for the establishment of an institution for research in India, splendidly started by the offer of a gift of landed property calculated to yield an annual income of Rs. 125,000 for maintaining an institution for post-graduate studies from Mr. J. N. Tata, the well-known mill owner and merchant of Bombay. The perusal of the preface to the second edition will repay and refresh all who see in the larger knowledge and liberality of our own day the best promise of a true conception as to the wider scope of the missionary work of medicine both at home and abroad. We can only trust that the way in which such hope is set forth by this Nestor of medicine will be studied by rich men at home. They will see what is being done by other races in this cause and seeing this will, we cannot doubt, be impelled to "cast money into the treasury" for equipping our universities to make even larger contributions than at present towards the growth of that "tree of life" which is "for the healing of the nations."

GAS AS A FUEL.

THE uses and advantages of gas as a fuel are dealt with by Mr. Lawson Tait in a pamphlet containing the substance of a popular lecture given by him at Llandudno. He puts the case for gaseous fuel so clearly and pointedly that all those who are interested in the smoke abatement problem will read the lecture with profit. Practically his views are an endorsement of those expressed in THE LANCET Special Analytical Sanitary Commission on Smoke Prevention and Perfect Combustion, the report of which was published in THE LANCET of Nov. 25th, 1893. At the outset Mr. Lawson Tait observes that in the ordinary fireplace of the English house nineteen-twentieths of the heat produced are carried up the chimney and wasted in the open air, the small proportion of one-twentieth being distributed into the room by means of radiation. This remark would seem to banish all doubt as to whether gas as a fuel may be economically

substituted for coal. But, as he points out, merely to put some asbestos fuel in an old-fashioned fire-grate and some Bunsen burners under is not to make a gas fire from which much benefit will be derived. The heat will be wasted by the chimney in the same proportion as that of the previous coal fire and the quarterly gas bill will increase in geometrical ratio. He recommends the use of sanitary glazed pipes for the flues so that the sulphur compounds in the products of combustion may be condensed. Mr. Lawson Tait's definition of a fog is that it is not a heaven-sent infliction, as is popularly supposed, but one which is sent up our chimneys from coal fires of our own creation, the result of unconsumed carbon which gets entangled in the still, damp atmosphere of our chilly wintry days and hangs there like an avenging angel. Coal firing is the main origin of the fog fiend and the more the public realise this and act upon it the better prospect will there be of freeing the air which we breathe from a dangerous and ugly impurity.

TICK FEVER IN NEW SOUTH WALES.

TICK fever has recently affected the herds in Queensland to a very disastrous extent and it is the general opinion that its extension to New South Wales is an event to be expected in the near future. This being so, stock-owners in the latter colony are anxious to supplement the precautionary measures already taken by Government by a system of protective inoculation. The Hon. the Minister for Mines and Agriculture accordingly suggested that an experimental inquiry should be undertaken, for at present wholesale inoculation is barred by the Animals Infectious Diseases Act. The inquiry was undertaken by Dr. Frank Tidswell, principal assistant medical officer of the Government, and his report has recently been issued. The experiments were carried out at the Maritime Quarantine Station, Sydney, between July 15th and Nov. 25th, 1898. The report is dated Dec. 29th, 1898, so that it must only be taken as dealing with the immediate effects of inoculation. The principal objects of inquiry were to ascertain the value of inoculation as to protective effects and to note whether inoculation had any harmful effect upon the quality of milk or meat. Dr. Tidswell's report opens with a short account of natural tick fever, otherwise called Texas fever. The disease is disseminated by ticks and not directly from animal to animal. The tick is, however, not the essential cause of the fever, but merely acts as a living inoculating syringe. Blood taken from a sick animal and inoculated into a healthy one will produce tick fever identical with that brought about by ticks. The essential cause is, as in malaria, a micro-organism which, although found in the blood of all infected animals, has not yet been discovered in the tick. Dr. Tidswell suggests that possibly it exists in the tick in a different form which has not yet been identified. He compares the part played by the tsetse fly in African cattle disease and that played by the mosquito in malaria. In whatever form the infection exists in the tick it is passed on from one generation of ticks to another by means of the eggs. Certain animals possess a natural immunity and cattle, though susceptible, after a time acquire immunity. This immunity after a single attack is only partial, but repeated attacks bring about a perfect immunity the duration of which has not been definitely ascertained although it seems probable that it lasts for one or two years. To bring about this immunity Smith and Kilbourne, the American observers who first described the disease, recommended purposely exposing animals to attacks by ticks as being simpler than operative inoculation, but in Queensland it was found that climatic conditions were not favourable to exposure and so inoculation was practised alone. The Queensland experiments were made with "recovered" blood—i.e., blood taken from an infected animal after the fever had passed off. This was found to produce milder effects than "virulent" blood, taken during the febrile period. Dr. Tidswell used both kinds and found but slight difference between them, but, as he says, his experiments were too few in number to found a definite theory upon, although it appeared that "recovered" blood was slightly less violent in action. It was found that inoculation if successful protected against re-inoculation, for of 10 cows inoculated which reacted not one reacted again when inoculated a second time. There are, however, some fallacies to be considered. 1. The blood of every recovered animal is not suitable for producing immunity. 2. The operation may be unsatisfactorily performed. 3. There may be some influence of the tick itself which is harmful in addition to the micro-organism. And these fallacies explain why it is that inoculated animals sometimes die when afterwards tick-infested. Inoculation sometimes causes death and always illness, but artificial tick fever is very much milder than natural tick fever. Reaction appears on an average seven days after inoculation and the illness lasts for one month or six weeks as a rule, though in one case the animal was ill for 100 days. With reference to the effects upon milk and meat the meat of an animal slaughtered during reaction was found to be pale, flabby, and soft, but no permanent injury is produced. With regard to milk the yield fell off in all cases after inoculation but recovered as the animal regained its usual health. The report concludes with a consideration of other means of prevention which are quarantine, dipping, and crush inspection. Quarantine may be divided into exclusion and isolation. Exclusion would seem to be sufficient provided that infected herds are kept out of the country and separated by a wide margin of "buffer land." Isolation is difficult to carry out, for ticks can be transported over short distances by various means. Dipping is good as a temporary measure, and inspection in a crush, which we take to mean inspection of a whole herd in a somewhat superficial manner, affords only partial protection. Dr. Tidswell comes to the final conclusion that other measures than inoculation have their uses, but that "our internal position should be rendered as secure as possible by inoculation and re-inoculation of our cattle." The report is a very interesting and careful piece of work.

TRADE VIEWS ON THE ABOLITION OF LEAD COMPOUNDS IN POTTERY.

IT was hardly to be expected that the conclusions arrived at in the report of Professor Thorpe and Dr. Oliver which was dealt with in THE LANCET of April 1st, 1899, as to the prohibition of lead compounds in pottery would pass without adverse comment from the representatives of the trade. But it must be admitted that their dissent from the conclusions of the part of that report which relates to leadless glazes is of a sweeping character. Thus on this point they say: "We must dissent in the strongest possible way from any such conclusion, which in our opinion is not at all warranted by the present experience of ourselves or of the pottery trade as a whole." We do not doubt but that Professor Thorpe and Dr. Oliver had a strong reason for their conclusion that (to quote the report) "by far the greater amount of earthenware of the class already specified can be glazed without the use of lead in any form." Indeed, these conclusions were based, we believe, on the results of a great number of successful experiments conducted at one of the largest manufactories. In regard to the proposal that all raw lead compounds should be "fritted"—that is, converted into a kind of insoluble glass previously to glazing—the manufacturers agree that this would be quite practicable and express

the belief that the time has come when the use of raw lead in glazes may be prohibited. They naturally ask, however, that sufficient time should be given to those manufacturers who have had no experience in the use of fritted lead compounds to carry out experiments with regard to their adoption before the abolition of raw lead becomes compulsory. This request is quite reasonable and it is gratifying to have the assurance that the manufacturers realise the necessity of reducing the risk to health and life by the continued use of raw lead compounds. In view of these representations we do not despair of the lead-poisoning problem in common with pottery being finally solved and of arrangements being shortly made which will comply with the requirements of the health of the workpeople and at the same time will not unduly interfere with the interests and progress of the trade.

THE MAYOR OF PHILADELPHIA ON TYPHOID FEVER.

THE newly elected mayor of Philadelphia is apparently somewhat unstrung by the cares of office and one of the effects of his exaltation to the mayoral chair has been to call forth from his lips some interesting comments upon the medical profession of his "belovèd city"; indeed, it seems that the good people of Philadelphia are entertaining in their midst a great diagnostician unawares. According to the April number of the *Ohio Sanitary Bulletin* there were in the first three months of this year no less than 4864 cases of typhoid fever with 485 deaths, and this in a population estimated at 1,200,000. Now, on April 3rd last the mayor delivered his inaugural address and he presumably took for his subject the differential diagnosis of typhoid fever from enteric fever. The conclusion at which he arrived was that in spite of the figures and of the opinion of the medical profession he was "far from believing that there exists a typhoid epidemic in our belovèd city." He believed, on the contrary, that the medical practitioners were confusing typhoid with "enteric or intermittent fever." Clearly the mayor dislikes the term "typhoid" and it matters little to what this terrible mortality be due provided it is not typhoid fever. If it be enteric fever Philadelphia is still a healthy city and there is no cause for alarm. It would, it appears to us, have been more becoming on the part of the mayor had he ascertained the fact that typhoid fever and enteric fever are convertible terms rather than to have delivered himself in this fashion on diagnostics and terminology. A seat in the mayoral chair of Philadelphia or of any other city does not confer omniscience upon the holder.

THE COLLEGE OF MEDICINE FOR CHINESE, HONG-KONG.

AN interesting account of the rise and progress of the College of Medicine for Chinese, Hong-Kong, was given last March by Mr. J. J. Francis, Q.C., on the occasion of the re-election of the Honourable Stewart Lockhart as rector of the college and the presentation of diplomas to students who had completed their studies. According to the report of the proceedings published in the *China Mail* Mr. Francis said that the college dated from 1887. Through the munificence of Dr. Ho Kai the Alice Memorial Hospital for Chinese had been founded in Hong-Kong in the early part of that year and it was at once seen that in connexion with this hospital there must be a Chinese staff of dressers or students or other assistants. Dr. Manson and Mr. Cantlie between them therefore organised this college for the training and education of Chinese in Western medical science, the teachers being medical men practising in Hong-Kong who gave their services gratuitously. The course of study was of five years' duration. The first diploma was presented in July, 1892, since which time unsuccessful applications had been made to the Government for an endowment and also for the passing of an ordinance which would recognise their students as having some status, but of course without any intention of placing them on the same plane as registered British practitioners. Sir H. A. Blake, the Governor, who presented the diplomas to the successful candidates, said that it had been found that there were apparently insuperable difficulties in the way of making a regular grant from the public funds and authorising a medical diploma. At the same time he appreciated the good results of the movement which had been apparent up to now and in addition to four students employed by the Government of the Straits Settlements Mr. Ho Nai Hop who has just received his diploma had been appointed an assistant medical officer in the extended territory of Kowloon.

ON THE TOXICITY OF THE BLOOD IN EPILEPSY.

TOXIC substances in the blood are now recognised as causal agents in many diseases. Excluding living microorganisms such as are known to be present in the body in many infectious diseases and such agencies as alcohol, lead, and uric acid, which are also recognised as determining causes of disease, there yet remains a third class of toxic agencies, less known but none the less important, which plays an important rôle in affections such as diabetes, chronic Bright's disease, and eclampsia gravidarum. Epilepsy has been long known to be capable of being produced in dogs by the administration of a powerful toxic agent—viz., *absinthe*[1]—and the peculiar intoxication of *absintheurs* has been observed to be characterised by a special proneness to the development of epileptiform convulsions (Magnan). With a view to ascertain more accurately whether there is an increased toxicity of the blood in epilepsy investigations have been made by Dr. C. A. Herter of New York[2] and Dr. P. Cololian of the Seine Asylums Department, France.[3] Dr. Herter examined the blood in 14 epileptics at Craig Colony, all of whom had been subject to *haut mal* for some years. Samples of blood withdrawn from each patient by venesection were defibrinated and small quantities were injected subcutaneously into rabbits at a slow rate, averaging five cubic centimetres of injection per minute. Varying quantities were thus injected to determine the "lethal co-efficient"—i.e., the number of cubic centimetres per kilogramme of body weight which sufficed to produce death. In this way it was ascertained that in 12 out of the 14 patients the toxicity of the blood was about the same as that of normal blood. Of the remaining two cases one gave a slightly higher and the other a considerably higher toxicity of the blood. The latter was an epileptic who suffered from prolonged headaches with congestion of the face and of the conjunctivæ, an habitual overfeeder at meals, 10 cubic centimetres of whose serum was fatal to the rabbit in 45 minutes—a distinctly higher toxicity than the average. Dr. Herter experimented also on a dog and on a Java monkey with similar results. He concludes that the toxicity of the blood is, allowing for the necessary crudeness of the method, not different in ordinary chronic epileptics from that which is found in normal blood except at such times as the status epilepticus when the coefficient of toxicity rises high. Dr. Cololian examined the blood drawn from his patients by venesection before, during, or just after paroxysms of fits. The blood was allowed to clot and the clear serum thus obtained was used for injection into mice and rabbits. It was noticed, *en passant*, as

[1] Magnan: Récherches sur les Centres Nerveux, 1876.
[2] Journal of Nervous and Mental Disease, February, 1899.
[3] Archives de Neurologie, March, 1899.

had been observed by others before, that the blood so drawn was dark and that it clotted very freely and rapidly, especially when drawn after fits. Control experiments were made with the serum of three healthy persons and it was found that from five to seven cubic centimetres per kilogramme of body-weight injected into rabbits produced no lethal effect. It was found (*a*) that in epileptics in the period between attacks (five experiments) the toxicity was but slightly raised above that of normal blood in two cases and was about normal in the other three cases; (*b*) that the blood immediately preceding convulsive attacks was (two experiments) decidedly more toxic than in group *a*, or than in health; and (*c*) that the blood immediately after attacks (six experiments) showed increased toxicity if drawn within a few minutes of the fits and that it produced convulsions and death readily in rabbits. In from one to two hours after, this toxicity slightly diminished. In discussing the results Dr. Cololian points out the analogies of the toxæmia of epilepsy with that of puerperal eclampsia and notes that the occurrence of albuminuria following epileptic fits has been noted in half of the number of cases investigated by MM. Voisin and Peron.[4] As regards the exact nature of the toxic substance present in the blood of epileptics nothing further is as yet known, since it has not been chemically separated or analysed. It is believed, however, that it is produced periodically in the body owing to "anomalies of nutritive exchanges" and that from its resultant effects it must be analogous to convulsive agents like absinthe. As contributory causes a renal incompetency with insufficient elimination of the poison and a cerebral predisposition (hereditary or acquired) to respond with undue facility and in the form of convulsions to the toxæmic condition are also indicated. On the whole, the facts ascertained bear out the more recent views regarding treatment for eclampsia and the status epilepticus—viz., limitation of nitrogenous diet, aperients, and in the grave cases venesection and an equivalent injection of sterilised normal saline solution to the extent of from one to two pints or even more.

THE ABUSE OF MEDICAL CERTIFICATES.

MEDICAL men cannot be too careful in giving certificates to hospital patients and persons belonging to the lower classes of life. They are often used for illegal purposes in several ways and especially as a cloak for begging by idle and unprincipled persons. It is not sufficient to write across the top of a certificate "Not to be used for begging purposes," as the incident about to be mentioned shows. A week or two ago several of the residents at Croydon received a call from a person who stated that he had been in the service of the corporation for 20 years in the capacity of driver of a water-cart but was unable to continue his work on account of varicose veins. In proof of this he displayed a certificate from a well-known medical man practising in the neighbourhood. With this certificate he had been from house to house collecting money for elastic stockings to enable him, he said, to resume his occupation. Fortunately, an intelligent police constable, seeing him come from a house, asked him the purport of his visit, to which the prisoner replied: "To get a piece of rag to tie up my finger." But on inquiry the householder stated that he had come to ask for money. On his way to the police-station he attempted to destroy a pocket-book containing a list of the generous donors who on the strength of the medical practitioner's certificate had given him various sums amounting in the aggregate to 16*s*. The practitioner was summoned to the police-court and he stated that the prisoner came to him and told him that he was a driver of a water-cart for the corporation; and that, believing his statement, witness had given him a certificate stating that he was suffering from varicose veins and that he was in want of an elastic stocking. He did so because prisoner told him that if he had a certificate he could get a letter for the Surgical Aid Society. Witness wrote across the top, "Not to be used for begging purposes," but this and the date had been torn off. A lady on whom the prisoner had called and to whom he had shown this certificate had replied to his request for money that it was "a surgical letter" he wanted, but prisoner said, "No, no; look at this," and showed her a list of the names of other residents who had contributed. A foreman from the corporation gave evidence that the man had never been in the employment of the corporation in any capacity. If it had not been for the astuteness of the constable there is practically no limit to the depredations which this impostor might have carried on, starting each day with a fresh list and working a fresh district. In hospital practice nothing is commoner than for patients to ask for a certificate either to enable them to get sick-pay from a club, a convalescent-home letter, or some surgical apparatus. Grave abuse may arise in any of these directions but in nothing more than in that of sick-pay. Perhaps the patient may be suffering only from dyspepsia, and by slightly magnifying his symptoms he can, in the rush of out-patient work, induce the physician to sign a certificate week after week. Great care should be exercised, for not only is grave injury done to the patient by inculcating habits of idleness, but it is also a duty which the profession owes to the charitable public, who rely so absolutely upon "the doctor's certificate" as a guarantee not only as to the medical aspect of the case but even as to its genuineness in other respects.

THE DRAINAGE OF HAVANT.

THE Local Government Board have notified to the Portsmouth Corporation, the Portsmouth Water Company, and the Havant Urban District Council that as a result of the inquiry held at Havant in December last they have decided to issue an Order requiring the Havant Urban District Council to provide efficient sewers for their district. Our readers will remember that the exciting cause of the inquiry was a report issued by Dr. Theodore Thomson and Mr. Whitaker on the surroundings of the Portsmouth Water Company's springs, in which attention was directed to the risk of pollution from the insanitary state of Havant.[1] On receipt of this report the company complained to the Local Government Board (under Section 299, Public Health Act, 1875) that the Havant Urban Sanitary Authority had made default in providing their district with sufficient sewers, and petitioned the Local Government Board to limit a time for the performance by that authority of their duty in that respect. The inquiry was conducted by Dr. Bulstrode and Mr. F. H. Tulloch, C.E., and in face of the evidence of the insanitary state of Havant then elicited, strengthened as it was by the previous report of Dr. Thomson, it is difficult to come to any other conclusion than has been arrived at by the Local Government Board. The time limit given by the Board is six months, and to those acquainted with the ingenious methods of procrastination often adopted by sanitary authorities forced to act against their inclination this period will seem by no means too short. The inclusive cost of providing an efficient system of sewerage for Havant was stated by Mr. Baldwin Latham at the inquiry to be about £10,000, of which sum, by the way, the water company's share as ratepayers is about £2000. The water

[4] Archives de Neurologie, No. 69, 1890.

[1] THE LANCET, Jan. 28th, 1899, p. 244.

company may be congratulated on the successful result of their action and it must also be a source of gratification to the more enlightened of the inhabitants of Havant that their health and the good name of their town are, at any rate so far as they depend on modern drainage, no longer to be left to the mercy of such incapable sanitarians as the Havant District Councillors have proved themselves to be.

SIR WILLIAM TURNER, D.Sc.

THE following were the words of the Public Orator, Dr. Sandys of St. John's College, in presenting Sir William Turner for the honorary degree of Doctor of Science at Cambridge on Thursday, April 27th:—

Virum regni totius medicorum concilio praepositum, virum honoribus academicis plurimis cumulatum, etiam noster Senatus titulo suo decorare anno proximo decrevit. Inter Lancastrienses natus, inter Londinienses educatus, inter Edinenses, medicinae in schola celeberrima, quam tot coloniae Britannicae studiorum medicorum quasi μητρόπολιν venerantur, anatomiae scientiam per annos plus quam triginta praeclare professus, non modo Universitati suae aedificiis novis instruendae operam insignem dedit, sed etiam studiorum suorum actis per seriem edendis iamdudum maxima cum laude praefuit. Idem, rerum naturae spoliis olim in Britanniam feliciter reportatis, Australasiae praesertim anthropologiam opere in magno accuratissime expositam luculenter illustravit. Nuper societatis Britannicae scientiarum finibus proferendis praeses in annum proximum designatus, ab eadem disputationibus de anthropologiae scientia etiam inter Canadenses habendis haud ita pridem praepositus, hominum omnium plausus propterea praesertim meritus est, quod simiarum superbiam recentem repressit et generis humani dignitatem veterem denuo vindicavit.

Duco ad vos generis humani vindicem, equitem insignem, anatomiae professorem illustrem, WILLELMUM TURNER.

Dr. Sandys's introductory speeches are always conspicuous not only for elegant Latinity but also for the happy way in which the Public Orator seizes on the salient points in the career of him whom the University delights to honour. Such honour was never better or more worthily bestowed than in the case of Sir William Turner the "vindex humani generis," and we may hope the bearer of this proud title in his capacity of President of the General Medical Council will continue his "vindication" as regards the rights and liberties of that portion of the race which practises or wishes to practise the noble art and science of medicine.

ANÆSTHETIC LEPROSY: CHANGES IN THE NERVES AND SPINAL CORD: NECROPSY.

ONLY a few histological investigations of anæsthetic leprosy have been recorded in literature and examination of the spinal cord and ganglia has been still rarer. In a case described by Samgin [1] this disease began with chronic rhinitis and was soon followed by pain and then by anæsthesia in the arms and legs. The body also became almost entirely anæsthetic. The form of the anæsthesia in the affected areas was as follows. There were complete analgesia and thermo-anæsthesia, but tactile sensibility was retained though in diminished degree. The disease pursued the usual course with smooth desquamative skin changes and with atrophic patches which in the anæsthetic areas became confluent and finally underwent destruction and cicatrisation. The facial nerve was paralysed on both sides in its upper part, but there were no bulbar symptoms. Claw-hand was present on both sides. The peroneal nerves were paralysed. The ulnar nerves felt thickened and hardened. The symptoms pointed on the whole to anæsthetic leprosy and excluded syringomyelia. The necropsy revealed a variety of instructive conditions. In the affected patches of skin lepra bacilli were present and they were also found in the peripheral nerves, but not in the spinal cord, posterior root ganglia, or brain cortex. The nerves examined (ulnar and peroneal) showed interstitial neuritis, with an almost entire disappearance of the myelin. In the spinal cord there was found secondary degeneration of the posterior roots and of the columns of Goll (sensory tract). Degenerated nerve fibres were also found within the ganglia of the posterior roots and these were apparently continuous with those occurring in the peripheral nerves. The cells of the grey matter of the cord in the anterior cornua were not degenerated. Samgin believes that the degenerative process began in the peripheral ends of the sensory nerves of the skin and passed upwards into the spinal cord *viâ* the posterior roots, constituting thus a degeneration of the entire sensory neuron. The changes seem to be analogous to those occurring in the peripheral neuritis of alcoholism and they suggest the action of a toxic agent elaborated by the bacilli during their growth in the cutaneous and subcutaneous tissues and in the nerve-trunks.

[1] Deutsche Medicinische Wochenschrift, No. 30, 1898, p. 475.

TRADE-STAMPS AND DEFECTIVE SANITARY FITTINGS.

IN a recent letter addressed by a correspondent to our contemporary the *Public Health Engineer* headed "Trade-Marks" attention is called to the desirability of stamping by some properly constituted authority the various fittings and materials used in plumbers' work. The idea is excellent but not by any means new. At the Congress of Plumbers and others interested in sanitary matters held in London in 1884 the question after considerable discussion formed the subject of a resolution. It was proposed that the ancient practice of marking lead and solder formerly exercised by the Worshipful Company of Plumbers should be revived. Since then many by-laws have been passed by various local authorities regulating to some extent the nature and quality of material to be used in such work, but very much still remains to be done. Many if not all the water companies stamp or restrict the use of the fittings relating to the water-supply; this does not in all cases tend to the improvement of the sanitary condition of a building but merely to the prevention of waste of water and for this reason is not of much value from a sanitary standpoint. The whole question deserves very serious attention, but from its gigantic proportions it is far from being one easy of solution. Even supposing that such a body as the Plumbers' Company undertook to mark as efficient all sanitary appliances or materials voluntarily submitted to them they would require depôts for the purpose throughout the kingdom, whilst the difficulty of making any such arrangement one of compulsion would be enormous. Apparently the best plan would be some increased development of local by-laws.

THE DEVELOPMENT OF DENTINE.

THE Transactions of the Odontological Society of Great Britain for March contain a paper by Professor F. T. Paul which throws a good deal of fresh light upon the development of hard unvascular dentine. To a great extent the conclusions arrived at confirm the view held by Mr. J. H. Mummery—namely, that the development of dentine is practically similar to the formation of bone in membrane. Several interesting points were, however, demonstrated by Professor Paul. Chief amongst these was the fact that the young pulp contains a complete fibrous basis composed of delicate wavy fibres interlacing in every direction. These fibres are found to be directly derived from the cells and are of a gelatin-yielding character. He also showed that the first layer of cells formed on the surface of the pulp beneath the ameloblasts

are not odontoblasts, but develop into fibres, and on the actual surface these fibres blend together and form a membrane which lies just beneath the ameloblasts. The odontoblasts make their appearance subsequently and insert themselves as it were between these fibrous surface cells, the nuclei of the latter undergoing atrophy. According to Professor Paul the odontoblasts are invested with a complete network of fibres derived from the connective tissues of the pulp, these fibres meeting over the dentinal end of the odontoblasts so as to form between these cells and the dentine matrix a thin fibrous layer. The matrix is, in Professor Paul's opinion, probably secreted by the odontoblasts into this layer of tissue. The paper to be appreciated must be read. It is excellently illustrated and is certainly one of the most valuable recent additions to the knowledge of the development of dentine.

THE SANITARY INSTITUTE.

THE annual dinner of the Sanitary Institute was held on May 2nd, at the Whitehall Rooms, H.R.H. the Duke of Cambridge, President of the Institute, being in the chair, supported by a large and distinguished company, including Sir Joseph Fayrer, F.C.S.I., Sir Francis Sharp Powell, M.P., Sir Richard Thorne, K.C.B., Sir S. G. Johnson, Sir Alexander Binnie, Rear-Admiral Fitz George, Major-General C. P. Phipps Carey, Mr. Shirley Murphy, Professor W. H. Corfield, Dr. Farquharson, M.P., Mr. H. Law, chairman of the Council, Major Lamorock Flower, Dr. L. Parkes, Professor F. Hobday, Mr. T. W. Russell, M.P., Mr. Baldwin Latham, Dr. W. Collingridge, Dr. J. F. J. Sykes, Mr. E. White Wallis, secretary, and others. After the loyal toasts, Sir Alexander Binnie proposed "The Naval and Military Forces of the Empire" and referred to the improved sanitary and general condition of those forces. They could never forget the valuable services and great sanitary work which His Royal Highness their chairman had rendered to and accomplished in the army, which by this and other means had been brought to a state of greater perfection than ever before had been the case. Major-General C. P. Phipps Carey briefly responded. Sir Richard Thorne, K.C.B., proposed "The Houses of Parliament." As a civil servant of 28 years' standing he remarked that he could honestly say that during the whole of that time he had never known any technical advice which he had given to have been put aside on purely political grounds when the matter concerned was one of public interest. This was an ideal which he ventured to think was not reached in regard to any other legislative machinery than our own. The relations between technical advisers and Her Majesty's Government were always most harmonious, due to the fact that the Ministers had great confidence in their advisers. They had in these two Houses, with their honourable traditions, honourable men, and, in fact, the most honourable men who could be selected to represent the nation, and they as Englishmen ought to feel the greatest gratification in having such a heritage. Mr. T. W. Russell, Parliamentary Secretary to the Local Government Board, responded to the toast and expressed his opinion that the Houses of Parliament were seen at their best when they were engaged on questions of public health such as that Institute was interested in. With regard to such a question as the housing of the poor, about which much was written and said though he did not think always wisely written and said—though when the Government came to deal with it they would take care to separate the chaff from the wheat—a Bill had just gone through Committee which dealt with a portion of that great question, and he did not think its author, Mr. Chamberlain, would claim more for it so far as the ownership of small houses was concerned. It was a measure which he hoped would be exceedingly useful to thrifty people. Having alluded to the great difficulties which local authorities had to deal with in regard to this matter through the excessive cost of acquiring areas Mr. Russell referred to the Vaccination Act. He said that many people who ought to have known better had been unjust to the Government last year when the Vaccination Act was passed. He believed that Act was going to win, and in support of this pointed out that with 150 boards of guardians opposed to the old law they could not hope to enforce it. The Act had to a large extent abolished stational vaccination and substituted domiciliary vaccination—facts which, he believed, would have their influence in time. Compulsion and all its effects were abolished and the fact that they were issuing 1700 tubes of lymph a day—the number had been steadily increasing since the Act came into force—was a happy augury. He believed that it would be found in the end that the vaccinations this year were more than last year. His Royal Highness the Duke of Cambridge then gave the toast of the evening—"The Sanitary Institute." He referred to the great work which the Institute had done in promoting sanitary knowledge. So large had been the public use of the Parkes Museum that the Council had decided to start a building fund in order to provide a larger building to give the accommodation required by their largely increasing work. He believed that the Institute was one of the most valuable that had been brought into existence in recent years by the march of events. There were 2300 members and associates, the income last year was £3773, its capital amounted to over £12,000, 200 meetings last year had been attended by 9000 persons, while 90,000 persons had visited the museum and exhibition; these were good results which, he believed under the wise guidance of the present Council would in the near future be exceeded. Mr. Henry Laws, chairman of the Council, acknowledged the toast, and referred to the part which the Duke of Cambridge had taken in founding the Institute 23 years ago. The progress of sanitary science during the last quarter of a century had been very remarkable, and their Institute had the merit of taking part in the great work which had been going on. They had held no less than 161 examinations, in which some 6000 persons had taken part, 66 per cent. of the candidates passing. They had had 10,000 students in their various classes and many thousands of persons had visited their museum. The members of the Council took extreme interest in the work, but he thought that not a little of their success was due to the energy and marked ability of Mr. White Wallis, the secretary. He referred to their late chairman, Sir Douglas Galton, under whose guidance for the last three years they had broken the record each year, and concluded by thanking His Royal Highness the Duke of Cambridge for his long and continued interest in the work of the institution.

OZONE IN THE HOUSE OF COMMONS.

THE suggestion that the air of the House of Commons should be ozonised in view of the epidemics of influenza to which the Members seem peculiarly liable deserves attention. The ozonisation of air may of course be easily achieved now that a current of electricity is everywhere available. It is necessary merely to transform the current into a high tension current and to cause a current of air to flow through a chamber in which a silent discharge of the electricity is going on. The evidence of experimental work, however, does not encourage the idea that the ozonisation of air would necessarily destroy its infective properties. It must be remembered that the first thing that ozone would attack would be unorganised matters which prevail everywhere, and in this process the ozone would be destroyed. Again, on this account ozone is not without a decidedly injurious

action on the furniture and fittings of a chamber. We doubt whether the ozonisation of the air of the House of Commons could be carried out in a satisfactory way or with any important effect in the direction intended, that is, of sterilising the atmosphere. The presence of ozone in the air would, however, destroy evil smells which arise in the House of Commons, we believe, from the fact that the air is supplied through the ventilating apparatus from the neighbourhood of the river. Dry ozone is quite without bactericidal action and not before it is very moist does it exert any action upon micro-organisms. Mr. Akers-Douglas stated in the House of Commons on Tuesday that the experiment could not be entertained on the score chiefly of expense, while the practical merits of the process, he added, do not appear to be sufficiently established. We are inclined to regret this conclusion, for had the experiment been decided upon its progress could not have been without interest and some practical results. The ozonisation of the air of the House of Commons would be almost certain to create a good impression, for air containing a small percentage of ozone has a peculiar fresh character and is doubtless also invigorating. Whether these properties would have any influence on the tide of political affairs is an interesting possibility upon which to speculate.

VOLVULUS OF THE SIGMOID FLEXURE RELIEVED THREE TIMES BY LAPAROTOMY.

IN the *Boston Medical and Surgical Journal* of March 9th Dr. E. M. Foote has recorded the following case which he, no doubt correctly, claims as unique. The patient was a deaf-mute, aged 22 years. On Jan. 28th, 1898, his abdomen was noticed to be unusually large. Aperients were given without effect. The distension increased until on the third day the circumference of the abdomen measured 40 inches. The swelling was obviously due to two great gaseous spaces lying side by side centrally in the abdomen. They could easily be mapped out as their percussion notes were slightly different, while from the deep tone and the area occupied it was plain that each sac was as large as a distended stomach. Volvulus of the sigmoid flexure was diagnosed. Median laparotomy was performed. The sigmoid flexure was twisted from right to left. It must have measured over three feet along its outer border and about five and a half inches in diameter. Some of the air had to be evacuated by puncture with a trocar before it could be drawn out through the incision. After untwisting the fæcal contents and gas were squeezed down into the rectum, while irrigation was carried on from below until the bowel was emptied. There was partial rupture of the muscular fibres in the descending limb of the sigmoid flexure. This rent and the trocar puncture were closed by fine silk stitches. Recovery followed. On June 6th, 1898, the obstructive symptoms recurred. As the distension was much less than previously the patient was anæsthetised and the hand and forearm were introduced into the rectum, while an attempt was made to untwist the loop from the surface of the abdomen. It failed. An incision was made to the left of the median line, and the sigmoid flexure was untwisted without difficulty. It had been twisted in the same direction as before. Recovery followed. On Jan. 1st, 1899, after a period of constipation there were a temperature of 103° F., moderate abdominal distension, and a tumour below the umbilicus to the left of the middle line. Purgation and enemata produced fluid stools but the tumour remained. Though the signs of obstruction were less marked than previously they seemed to show that volvulus was present. Laparotomy was performed. The sigmoid flexure had become twisted again from right to left, but it contained only a moderate amount of gas and a little fæces. The ascending and descending limbs were adherent by fresh fibrin at the point of crossing. There were also old adhesions to the omentum. Gas could not be squeezed through the twisted portion and as the bowel already showed inflammatory changes it was evident that relief could have been obtained only by operation. A second incision was made as in the operation for appendicitis and the descending portion of the sigmoid flexure was stretched smoothly across the lower part of the abdomen and stitched to the parietal peritoneum close to the right anterior superior spine of the ilium in order to prevent recurrence.

COLEMAN v. COLDWELL AND CO.

THE defendant in this case, a dispensing chemist, was sued for damages for having through the negligence of his assistant supplied an ointment to the mother of the plaintiff, an infant, whereby the plaintiff's face had been disfigured. The child was affected with ringworm on the face. According to the report of the trial the ointment supplied contained nitrate of mercury "of the strength prescribed by the British Pharmacopœia," but whether the stronger or the milder official preparation was given is not stated. It is unreasonable to suppose that it was the latter. The defendant pleaded (1) that there was no negligence. (2) that the ointment was not of a noxious character, (3) that the plaintiff's face was not injuriously affected by it, and (4) that if it was so affected it was in consequence of the ointment not having been properly applied in accordance with the instructions given to the plaintiff's mother. The jury found for the plaintiff, assessing the damages at £5, and Mr. Justice Phillimore gave judgment accordingly with costs on the High Court scale. His lordship thought the case of sufficient importance to justify the plaintiff in bringing the action in the High Court instead of the county court. The question of negligence turned upon the direction given by the defendant's assistant. In the first place no label with instructions for use was put on the box. In the second place the account of the mother of the plaintiff was that she was told to put the ointment on a rag and keep it on the child's face two or three times a day. The defendant's assistant, on the other hand, alleged that he told the mother to wrap a piece of old rag round her finger and apply a small quantity of the ointment to the place and then rub it off. To our minds such a direction implied that under certain conditions the ointment might act injuriously and thus justify the contention that it was of a noxious character. It is quite possible that the account on either side was made in good faith and in accordance with the oath which each party had taken to speak the truth. The finding of the jury on the plea in question goes no further than that the balance of evidence was in favour of the plaintiff. It is well known how difficult it is to remember and to represent exactly the words which passed in conversation. The late Mr. Justice FitzJames Stephen was wont to lay great stress on this when directing juries. It is difficult to understand the conflict of medical evidence regarding the fact whether the child's face was injured by the ointment. It could hardly be contended that a simple patch of ringworm on an otherwise healthy skin—and we do not find any evidence to the contrary—would leave an indelible mark. More than seven months had elapsed between the time of the application of the ointment and the date of the trial and surely if any disfigurement still existed there must have been very considerable irritation. As to the probability of the marks disappearing there would be, of course, room for difference of opinion, but if the jury believed that there was disfigurement and that it was caused by the ointment it was not contrary to common sense that they should infer that the marks might to a certain extent be permanent. After a careful review of

the evidence we feel compelled to subscribe to the verdict found for the plaintiff and to mark our sense of its moderation. It was clearly not a case for exemplary damages. The trial raises some important questions as to the privileges and responsibilities of dispensing chemists. Many people, in fact the majority, who seek their aid are of the poorer class and have little knowledge of the quality and properties of the medicaments which they buy. They trust implicitly to the chemist, believing that since the latter sell drugs for healing purposes he therefore is possessed of the necessary knowledge to direct their use. In a given case this may or may not be so, but if the dispensing chemist undertakes to prescribe medicines he ought to be held accountable for any harm which may ensue from insufficient or careless direction. Moreover, those who cannot afford to pay for medical treatment can always obtain it free of cost at a hospital or from the parish medical officer.

ENTERIC FEVER IN BISHOP AUCKLAND.

DR. EUSTACE HILL, the county medical officer of Durham, has issued a report upon the prevalence of enteric fever in the town of Bishop Auckland during 1898 and the sanitary circumstances of the said town. The prevalence and death-rate were both most marked during the month of December, there being 45 cases notified with five deaths and 38 houses newly infected. This exceptional incidence at a time when cases of disease attributable to local sanitary defects were declining elsewhere seemed to point to some general infection either by water or milk. In 1893 Dr. Hill came to the conclusion that an outbreak which occurred at that date was due to polluted water, but this view did not meet with the approval of the Local Government Board who were inclined to attribute the outbreak to insanitary houses and unventilated sewers. As regards the epidemic of last year Dr. Hill concludes that although some of the cases may have been due to insanitary houses (of which there is apparently a fair number and concerning which the district council seem to favour a simple policy of doing nothing although urged to take action both by the county council and the Local Government Board), yet that on the whole the sudden rise in the number of cases during December was due to pollution of drinking-water. The water-supply is obtained from the river Wear, it is supplied to the town without proper filtration, is much polluted by raw sewage above the intake of supply, and, moreover, is sometimes pumped from the river "at a point below the entrance of raw sewage from houses in the Bishop Auckland district." Enteric fever occurred at Witton Park and other places discharging unpurified sewage into the Wear above the Bishop Auckland intake during October and November, 1898. Between Nov. 12th and 23rd there were heavy falls of rain and snow in Weardale, which would naturally wash sewage into the river. Between Nov. 30th and Dec. 23rd there were eight cases of enteric fever in South Church, a village supplied with Bishop Auckland water. The district council are, it is true, constructing a new filter, but the storage capacity is only sufficient for two days and no new storage works are being put in hand. Dr. Hill concludes his report in the following words and we must say that we cordially agree with him: "It is deplorable that the Local Government Board after condemning the Wear as a source of water-supply in 1896 and refusing to permit the district council to obtain a loan to improve the filtration and storage of water drawn from the river did not follow their action to a logical conclusion but declined to compel the Urban District Council to adopt their strong recommendation to obtain a pure and wholesome supply of drinking water from a source which is readily available." If people will drink raw sewage it is no wonder that they suffer from enteric fever, and the Bishop Auckland District Council, if they will not learn from cases at home, might look farther afield and consider what happened at Maidstone.

THE MEDICAL REGISTER.

THE Medical Register for 1899 has made its appearance. We were able in about 21 minutes to find upon the official roll of the profession as many names of dead men—a matter which seems to us so pregnant in its possibilities for fraud that we propose to return to it at an early opportunity in our general consideration of the Register.

DEATH OF PROFESSOR BÜCHNER.

PROFESSOR F. C. K. LUDWIG BÜCHNER, who died on Monday last at Darmstadt, was a member of the medical profession. Having graduated in medicine at Giessen, after study also at Vienna and Würzburg he became a lecturer at Tübingen. But his famous book, "Kraft und Stoff" (Force and Matter), written in 1855, raised him at once to the position of a leading philosopher, though his views, from what was considered at that date their materialistic nature, ruined his academic career. "Kraft und Stoff" has been translated into many European languages and the principles of philosophy there expounded harmonise well with the discoveries of modern science.

PETROLEUM LAMP ACCIDENTS.

IT is a pity that the controversy raging round the questions of raising the flash-point of the oil on the one hand or of enforcing the safe construction of lamps on the other cannot be speedily settled, for in the meantime the danger still exists. Our own views on the subject are well known and are based upon practical experiments and experience. These were expressed at some length in the report of THE LANCET Analytical and Sanitary Commission on Dangerous Paraffin Lamps published in THE LANCET on Jan. 4th, 1896. In a communication which we have received this week from Mr. A. Braxton Hicks, the honorary secretary of the Coroners' Society and coroner for London and Surrey, we find that he and the society to which he belongs are completely in accord with the results expressed by our Commissioners. The evidence brought forward in this document claims very careful attention since obviously coroners are brought face to face with the fatalities due to lamp accidents and the particulars under which they occur. As Mr. Braxton Hicks points out, a section of the petroleum trade has endeavoured to show that the raising of the flash-point of the oil would do away with such fatalities, but coroners who inquire into all those cases know perfectly well, and are supported by the opinion of the different juries, that it is the faulty construction of the lamps which is really responsible for the deaths. As is further pointed out, "it must be apparent to any person, prejudiced or not in favour of a certain flash-point, that a time must arise when a lighted lamp will cause vapour to be given off in the container. When that time arrives and the vapour can come in contact with the flame an explosion will occur, and this independently of the flash-point. It may be that the higher the flash-point the longer will be the time before this happens, but that does not in any way minimise the effect of badly constructed lamps." This is exactly the view expressed by our Commissioners and we think that the testimony of coroners pointing to the same conclusion is a strong argument that these views are reasonable and correct. The opinion of coroners on this subject must be listened to with respect since it is not likely that they can entertain any prejudice or be influenced by trade or other interests. In the course of their duties they must gain a very strong impression of the necessity of some legislative action being

taken and of the direction which it should take in order to lead to a satisfactory solution of a serious question.

A PUBLIC meeting will be held on Friday, May 12th, at 3 P.M. at the Mansion House under the presidency of the Lord Mayor to consider the transference of the Belgrave Hospital for Children to a new site at Kennington, where it will form a hospital for children in South London. The Lord Mayor will be supported by, amongst others, the Duke of Westminster, the President of the Belgrave Hospital, the Bishop of Rochester, and Dr. Farquharson, M.P.

THE annual dinner of the Royal Army Medical Corps will be held in the Whitehall Rooms, Hôtel Métropole, London, at 7.45 P.M. on Monday, June 12th, 1899, the Director-General in the chair. Lieutenant-Colonel J. Hector (135, Brigstock-road, Thornton Heath, Surrey) is again acting as honorary secretary to the dinner committee and will be glad to hear from those who intend to be present.

THE opening lecture of the summer session at the Hospital for Consumption and Diseases of the Chest, Brompton, will be delivered on Wednesday, May 10th, at 4 P.M., by Dr. Frederick Roberts, who has taken for his subject the Clinical Investigation of Cases of Chest Disease. The lecture is open to all students of the hospital and to all qualified members of the medical profession.

THE annual meeting and May dinner of the Aberdeen University Club, London, will be held at the Trocadéro Restaurant on Wednesday, May 17th, at 7 P.M. Sir James Sivewright, K.C.M.G., will take the chair, and intending diners should communicate with the honorary secretaries, Mr. J. Gerard Laing and Dr. James Galloway, at 54, Harley-street, W.

A CONVERSAZIONE will be given by the President and Council of the Medical Society of London in the rooms of the society, 11, Chandos-street, Cavendish-square, W., on Monday, May 15th. The President will receive at 8.30 P.M. and an oration will be delivered by Mr. Alban Doran at 8.45 P.M. on Shakespeare and the Medical Society.

WE stated last week that the Baillie Lectures will be delivered by Dr. Dickinson on the afternoons of May 11th, 18th, and 25th at St. George's Hospital Medical School. The time of the lectures as at first announced was 5 o'clock P.M., but we understand that the correct time is 3 o'clock P.M.

THE Bavarian Government has followed the lead of Prussia, having recently issued an order that the Universities are henceforth to confer the degree of Doctor of Medicine only on persons who have previously passed the State examination qualifying them as practitioners.

AT the next meeting of the Medical Society of University College, London, which will take place on May 10th, Dr. G. Vivian Poore will deliver an address on Medical London of the Eighteenth Century. The chair will be taken at 8.30 P.M. by Mr. Heath.

A TELEGRAM received at the Colonial Office on Tuesday last from Hong-Kong reports that there were 28 new cases of plague and 31 deaths during the week ending April 29th.

A CHEQUE for £1000, as a donation to the Prince of Wales's Hospital Fund, has been received from Mr. J. B. Robinson.

MEDICAL MEN AS PUBLIC MEN.[1]

BY STANLEY HAYNES, M.D. EDIN.

THIS is a serious time for medical practitioners. We are confronted with difficulties and dangers in many directions; we witness powerful and often insidious combinations against our prosperity; we are sometimes, and unjustly, accused of neglect and even of crime. We do not occupy the position in public estimation to which we could attain if we were only more united and we do not make our needs or our aspirations sufficiently known. The object of this paper is to outline some of the disabilities under which we labour and to indicate some of the methods we can adopt to sever the bonds which we have placed upon ourselves by our own generosity towards and forbearance with the public. We are robbed in many directions. We find ourselves grossly interfered with by many: druggists prescribe, clergy prescribe, district visitors prescribe, busybodies prescribe, midwives prescribe, district nurses prescribe, but our weak law does not proscribe. As a rule the splendid, continuous, toilsome, anxious, unselfish, often disagreeable and repellent work of the medical profession fails to be recognised, being taken for granted and as a matter of course; but when a self-dubbed "doctor" or "medical student" gets into any trouble the daily press bestows brevet rank and our profession is shamelessly reviled. We are expected to be courteous to all though rudely treated, to be generous though ill paid, to be honourable in all our dealings while not honoured, to be patient when impudently imposed on or defrauded.

As some check upon these abuses I wish to advocate that those medical practitioners who can should take more active parts in public life in various ways. If we esteem ourselves the world will respect us more; if we assert our rights in a dignified manner they will be recognised; if we come forward as public men and women to prove that we are thus promoting the welfare of the community we shall be acknowledged as public benefactors. It is partly because so many of us bury ourselves in our profession that we are very apt to be lost sight of and little thought of. When the public observe medical men struggling in a crowd against each other, each striving to be uppermost and self-assertive in the fight for existence, and too often acting as if money-getting constituted the alpha and omega of life, we cannot be surprised if we are sneered at. While noses are kept against grindstones upward vision is impossible. We want to look beyond the mere interests of our individual professional toil and lives and to investigate the needs and requirements of our profession as a whole, especially in relation to our duties not only to the other members of our profession but to the mass of our neighbours. When we take a broad and comprehensive view of our obligations as citizens and manifest our interest over a large field of usefulness, instead of working down into a narrow groove of sordid selfishness, we shall the more prove our light before men and—meeting with more respect—find ourselves on a higher platform in the estimation of our countrymen. If we act as tradesmen we must expect to be treated as tradesmen; if we act as professional men should—with a high sense of ethics, always "on the square" and with exalted ideas and actions of honour—we shall be treated as professional men, sacrificing our lives in the prevention of diseases, in the treatment of maladies, in the alleviation of pain, the promotion of euthanasia, and in general by rendering ourselves more extensively serviceable to our fellow-creatures and being actuated by a sincere desire for knowledge. When we prove ourselves worthy of confidence we meet with it; when we behave generously we are entitled to liberal consideration and, usually, receive it. We should strictly observe all moral laws and respect the secrets entrusted to our keeping as our own, so long as they are consistent with the laws of the realm and the government under which we may live.

There are many and various ways by which many medical men can benefit their neighbours and therefore themselves. Instead of limiting their energies to the daily round, the common task, they can emerge into public life. They can

[1] A paper read before the Worcestershire Medical Society on Jan. 24th, 1899.

begin by taking active part in district and parochial councils, promote the success of various institutions, societies, and clubs (such as cricket, golf, quoits, curling and skating, boating and swimming) which do not militate against their interests, discussing affairs (excluding religion and politics while in practice) with neighbours, founding and fostering local museums, and lecturing sometimes on various matters in which they are interested or in which they perceive that the public needs enlightenment or for the formation of public opinion. They can display their sympathy with and help ratepayers' associations, horticultural and agricultural shows, asylums, and almshouses. They can do much to advocate and inculcate temperance, and in this as in many other ways we should constantly bear in mind that we have a heavy responsibility and onerous duties. Some can qualify as magistrates and do much to enhance the dignity of our profession. A few can accept the chairmanships of public bodies, such as district and urban councils, while others can seek election as members of county councils. Commissions in the militia and auxiliary forces help us in public estimation. But beyond these and many other offices which might be mentioned we should consider what can be done by medical men as Members of Parliament, as members of the General Medical Council, as assessors to judges, and as coroners.

I wish to press upon the serious attention of such members of our profession as may become acquainted with this paper our great want of active Members of Parliament in both Houses selected from prominent practitioners. We sadly need a considerably increased representation in the Lower House and a recognition by life peerages of the positions worthily occupied by several of our surgical and medical leaders. There are excellent men qualified to become our representatives, and we should appeal to them to come forward to maintain our cause and to fight our battles and we should promise our warmest support to them and act up to it with much perseverance and no apathy, which last is a blight and a curse to our profession as public men. We need Members of Parliament sufficient in number to prevent the repetition of such invertebrate legislation as was enacted last year by the passing of the so-called "Vaccination Act," which was a disgrace to the Government and a source of indignation to our profession. The Act is a blot on our civilisation, a retrograde slide in sanitation, a prospective calamity to our nation, a base surrender to the prejudices of noisy fanatics, and utterly unworthy of the supposed strongest Government which we have had for many years. The mad rush of applicants for certificates of exemption under Section II. of that Act was a sad and instructive result of the harm already done by the ignominious yielding of the Government to the prejudices and ignorance of the loud-mouthed faction of anti-vaccinationists.

The Vaccination Bill was in part correctly declared to be "a tremendous experiment." "Tremendously costly experiment" would have been absolutely true. Besides the monetary losses accompanying and succeeding epidemics of variola, to be borne by individuals and by public authorities, there will be a large increase of pauperism in our anti-vaccination centres as a result of the lessened power of weakened workpeople and the paralysis of trade and displacement of work, as was exemplified at Gloucester, the towns around which suffered heavily in consequence of panic from proximity to a dangerous disease centre. We must prepare plans for and erect small-pox hospitals throughout the country and largely increase our asylums for the blind. The million of money presented so unnecessarily and unexpectedly last year to the tobacco trade would have constituted a nest egg towards the expenses resultant on the passage of the Vaccination Act. As a matter of income to our profession we can expect to gain largely by the enactment of that piece of folly. Public vaccinators are properly requiring special arrangements and increased fees throughout the country; we shall be called upon to vaccinate and re-vaccinate whenever there is a recurrence of small-pox panic; we shall have to attend many patients who could have been prevented by wise legislation from contracting a loathsome and disfiguring malady. After so many thousands have obtained exemption it will be difficult indeed to undo and to rectify the frightful error perpetrated, and in the meantime we must be prepared to largely increase our knowledge and treatment of a disease which had become rare throughout northern Europe. Who can tell how far the mischief may spread or how disastrous the consequences may become? When the question of amended legislation on vaccination comes before the House of Commons our Members there should be urged by us to ensure that the errors made last year should be rectified as far as may be (a difficult task to undo some of the mischief) and to insist on the importance of re-vaccination and on provision for it in all assemblages of adolescents especially—as in schools and colleges, factories and mines, railway and steamboat services, the mercantile marine, and other avocations in which numbers are congregated. That bugbear of the British, the liberty of the subject, has over-ridden much of our legislation and has been so exaggerated that it has degenerated into the licence of the lawless. We have been astonished to hear from a great statesman that the British will not tolerate coercion, although we encounter it in many directions, as medical practitioners ruefully know to their cost.

I have dwelt perhaps at too great length on the Vaccination Act because it is fresh in the memories of all of us and because it points clearly to our need of wiser legislation. Variola and its prevention is but one of the many diseases which urgently call for the attention of legislative members of our profession; syphilis, cholera, leprosy, plague, beriberi, enteric fever, and zymotic diseases generally are some of the other maladies needing supervision and prevention. Much has been done against the spread of some of these diseases, but the prevention of venereal diseases calls for most serious consideration by the Government, as now every immoral, incontinent man and woman possesses full liberty and licence to spread such complaints unchecked. We possess the power if we will but exercise it of aiding our Government in the prophylaxis of disease. For this to be continuous and effective we need men who will strenuously uphold the paramount importance of maintenance of the public health and who will do all in their power to advance sanitation in its various aspects—men who would ignore party politics and act honestly as statesmen. We terribly need strong and capable representatives in both Houses to stem the tide of ignorance and fanaticism, of false inductions and mendacious assertions, on questions pertaining to the health and consequently the welfare of our working classes, and I therefore appeal to medical men who are enabled to contest elections to come forward to act on behalf of our profession as philanthropists. Besides the foregoing topics such nominees from our ranks would be able to advance other important considerations. For the better administration of justice we require medical men as assessors to our judges; we require a large increase of medical coroners; we require to work for the appointment of medical officers of health for combined areas, with withdrawal from general practice, fixity of tenure, and sufficient salaries; we require to improve the position and pay of parochial medical officers, of factory surgeons, and of post-office surgeons; we require legislation against illegal practice, prescribing druggists, medical aid associations, abortionist advertisements, indecent exhibitions and literature, and grocers' licences. There is urgent necessity for the enforcement of sterilisation of milk and the medical examination of cattle, cleanliness of dairies, piggeries, and other farm buildings concerned with the production and sale of food, the use of public slaughter-houses and skilled inspection of meat, the sanitary construction of dwellings and their drainage, the treatment of sewage and waste products from works, and the prevention of fog by lessened pollution from soot. A modern necessity is the diminution of phthisis by the erection of hospitals for the open-air treatment.

These are but a few of the matters which could be authoritatively insisted on, in the House of Commons and outside it, by medical Members of Parliament. From time to time we can hope that such men as Lord Playfair will come forward to restore and to maintain the fame of Great Britain as a civilised and enlightened power, with a single eye to the future benefit of our empire. As public men we should endeavour to form some public opinion on the advisability of strengthening the House of Lords and consequently stiffening the Government by the addition of medical life peers. There are several eminent leaders in surgery, medicine, and psychology, and scientists, who would worthily increase both the reputation—high as that is compared with the Lower House—of that august assemblage as a collection of statesmen (as differentiated from politicians) and the scientific attainments and honour of our profession.

With our expanded empire and the necessary maintenance of a powerful navy and a successful army our supply of

recruits for both becomes an increasingly important question which must not be shelved. In consequence of the practical abolition of compulsory vaccination that supply will be very seriously diminished from many of our centres of population, because the survivors of our unvaccinated boys will be of lessened physique, while many will be blind and deaf, as well as disfigured by pitting. In relation to this topic the arrest of syphilis, before and after entrance into our public services, must not be ignored.

The General Medical Council needs some amendment; there are too many in it who represent vested interests too largely. We claim more direct representatives, chosen by the army of general practitioners who know what they want and where their shoes pinch. We need some further modification of entrance into our profession; the three-portal scheme appears to have been strangely overlooked of late. With the overcrowded condition of our profession some check is advisable on admission into our ranks; instead of increasing we should decrease the facilities. Our congested state has caused the pushing, advertising, pachydermatous, replacing and underselling, sometimes unscrupulous practitioner to come into existence, and has so lowered our moral tone and our status that there is too much truth in the appellation bestowed on us by the public of "medical men" instead of "medical gentlemen" as we were formerly called.

We must watch the working of the Habitual Inebriates Act with the view of deciding whether it would be expedient, as so many already believe, to extend its operation to the non-criminal drunkard. The painful necessity for an inebriate of presentation before two magistrates before reception into a home for inebriates has been mercifully modified to one magistrate, but I trust that this is only a step in the direction of the abolition of this distressing regulation, which prevents many from placing themselves under the Inebriates Act. The prevention of abuse and the liberty of the subject could be easily safeguarded by a magisterial interview after reception within a prescribed number of hours and by notice of admission to the inspector.

The Midwives Bill, to be brought before the House of Commons, is one calling for careful attention and close watching by our Parliamentary representatives and by the medical and lay press, to prevent the repetition of such a surreptitious dodge as was effected when the Contagious Diseases Act was repealed and to ensure that such a Bill may be passed as may safeguard the lives of parturient women and their offspring, and to prevent a swarm of partly and insufficiently educated nurses from supplanting practitioners registered under the Medical Acts; the tactics of some of the certificate-granting bodies must be closely and suspiciously regarded and where necessary checkmated.

We are recognised by the State as qualified and responsible members of the healing profession; we do much for the State, but the State does nothing for us. Before our courts of law we are often abominably treated, receiving scant courtesy, little consideration, miserable remuneration and deficient accommodation. Some judges openly sneer at medical certificates; they permit many barristers to take cowardly, cruel advantage of their position in persecuting medical witnesses and to behave in such ways as would not be tolerated amongst gentlemen outside of the courts; we obtain no protection from insults and exasperating misstatements, insinuations, and offensive gestures, so that many blameless practitioners dread the ordeal of the witness-box, in which they may be asked the most groundless, shameless, and abominable questions with impunity. In the county courts we get no redress; they constitute an organisation for the protection of dishonest debtors; we are mulcted in fees and our time is wasted. If we succeed in obtaining an order for the payment of an account we can expect it to be for "half-a-crown a month," even when the debtor is well able to pay, but the court does nothing to enforce the payment or to cause its decree to be respected; consequently it is derided. If we proceed further, and have the trouble and odium of obtaining a judgment summons, we are plunged into disfavour with the lower classes and their supporters, clerical and lay. By some sections of our population we are taxed with overcharging because some just qualified, or imperfectly informed, or almost starving member of our profession is willing to act for a smaller fee. In the reign of Queen Elizabeth the standard fee was a guinea and was, with the then value of money, a proper recompense for a practitioner; but in the reign of Queen Victoria, when the guinea is worth very considerably less, the general practitioner finds himself inadequately paid if he obtain so much, which is not often. For the majority of our people the reign of our Queen has been a continuous and seldom checked period of increasing prosperity. Employers and employed, merchants and working-classes, have succeeded in improving their positions, but the medical profession, which does so much for them, has not been prosperous; it has much advanced in medicine and surgery and in reputation, but not in finance or in status at all commensurate with its merits and toil; on the contrary, we find great numbers of medical men working very hard for wretched remuneration; they are so poor that they cannot insure their lives or leave any provision for their families, to whom luxury is unknown. The list of applicants for relief to the British Medical Benevolent Fund is appalling, in showing the destitution to which many members of our profession and their widows and children are reduced, so that discarded clothing of all kinds, as well as monetary help, is most welcome.

The procedure of coroners' courts is one of the affairs needing improvement. Who is so well qualified to ascertain the cause of death as a medical man, chosen because he has proved his judicial capacity? And yet we often find that a solicitor has been appointed. Medical coroners have exercised their functions so well and have shown so sufficient a grasp of the legal aspects involved that their services should be more extensively recognised by the selection of more of their colleagues as vacancies occur. Many inquests are farces; some coroners (my experience being that legal ones distinguish themselves in this way) suggest or dictate to the jury what verdict should be given, and even go so far as to have it recorded that the deceased died by the "visitation of God," or from "natural causes," or give some other decision equally unsatisfactory and useless to the Registrar-General. It frequently happens that medical evidence is dispensed with and that the valuable opinion of a constable on the cause of decease is deemed enough. Where coroners receive fixed salaries the tendency is for inquests to become less frequent than when the coroner's remuneration results from the number held. Human nature being what it is this result was to be expected, and this course of action has the merit of saving much trouble to jurymen, police, and officials, at a saving of cost to the ratepayers, but it is open to doubt whether the causation of death is always satisfactorily elucidated. Our Parliamentary mouthpieces might well exercise their influence in securing that medical men only should be chosen as coroners and that the verdict should be pronounced after deliberation by the juries, coroners guiding their decisions in such a manner that the causation of death can be scientifically registered. More respect should be paid to the office of coroner, as representing our sovereign, and, his court being one of law, officials and others should rise on entrance and exit, as in the presence of an ordinary judge.

Our Poor-law medical service is most miserably underpaid, but while our profession is so needlessly numerous and men are consequently not unwilling to accept very poor remuneration they cannot hope for more liberal treatment. We can, however, and ought to, agitate for a generous superannuation allowance of Poor-law medical officers.

It is time that the staffs of our hospitals claimed some pecuniary recompense for their labours. This may be difficult concerning established hospitals, but should not be overlooked when opportunities occur or a new institution is founded.

The junior members of the Indian Medical Service are beginning to call for improved pay, allowances, travelling expenses, and leave, and it is to be hoped that someone of influence and practical experience will advocate their cause and persuade the Government to amend their position, even as the Army Medical Service, after many weary years of struggling with military advisers bound by red tape, has conquered bureaucracy and at length gained the status to which its splendid record of skill, gallantry, and care has entitled it.

Volunteer medical officers could make themselves audible and obtain recognition of rank as in the Royal Army Medical Corps.

It seems unfair that we should be taxed for inhabited house duty on the higher scale when we are obliged by our practices to occupy better houses than we would otherwise need, and that we have to pay assessed taxes on men and carriages kept only because they are requisite to earn our living.

Many wants have been indicated in this sketch, but it is very certain that if we do not ask we shall not receive.

This is an age of coöperation. We have allowed some sections of the public to combine against us and they cannot blame us if we at last turn and try to combat them with their own weapons. Let us prove our strength by our union, trusting that our right will result in our might.

MEMORIAL TO THE LATE PROFESSOR JOSEPH COATS.

SOME time ago a number of friends and admirers of the late Professor Coats of Glasgow University commenced a movement to raise a fund for a memorial to him and a proposal was adopted that it should take the form of a prize or scholarship in connexion with pathology. To carry out the proposed plan a sum of at least £1200 will be required. Already one half of that sum has been subscribed, but as many of Professor Coats's friends and former pupils who are widely scattered may not be reached by circulars those managing the fund ask us to intimate that contributions will be received and acknowledged by Dr. David Newman, honorary secretary, 18, Woodside-place, Glasgow; or by Mr. James J. MacLehose, honorary treasurer, 61, St. Vincent-street, Glasgow. The following subscriptions have been promised or received:—

	£	s.	d.
Mr. Charles J. Anderson	1	1	0
Dr. John Anderson ...	0	10	6
Professor M'Call Anderson	5	0	0
Dr. J. Grant Andrew ...	2	2	0
Dr. John Baird	1	0	0
The Master of Balliol, Oxford	1	0	0
Dr. Thomas Barr	3	3	0
Dr. George T. Beatson...	1	1	0
Mr. John Bell	5	5	0
Dr. Robert Bell	1	1	0
Mr. G. B. Bennett... ...	10	10	0
Sheriff Berry	3	3	0
Professor Bower, F.R.S.	2	2	0
Mr. Howard Bowser ...	25	0	0
Mrs. J. W. Brown	1	0	0
Mr. John James Burnet	5	5	0
G. J. and M. C., per George Cuthbertson ...	10	10	0
Dr. Hector C. Cameron	26	5	0
Mr. M. Pearce Campbell	2	2	0
Dr. James Carslaw... ...	1	1	0
Dr. Quintin Chalmers ...	1	1	0
Dr. Wm. Wallis Christie	1	1	0
Dr. Fred. Hugh Clarke...	2	2	0
Mrs. G. B. Clark	5	5	0
Dr. Iain Clerk	1	0	0
Mr. Allan Coats	10	0	0
Mr. Andrew Coats... ...	20	0	0
Mr. Daniel Coats	50	0	0
Mr. George Coats (Stanelev)	10	10	0
Mr. George Coats (Leicester)	20	0	0
Mr. James Coats, jun. ...	50	0	0
Mr. P. Coats	50	0	0
Sir Thomas Glen Coats, Bart.	50	0	0
Dr. William S. Cook ...	1	1	0
Mr. A. C. Corbett, M.P.	5	5	0
Mrs. A. F. Craig	2	2	0
Dr. D. McKellar Dewar	2	2	0
Dr. William Gibb Dun...	2	2	0
Mr. B. F. Duncanson ...	3	3	0
Dr. James Dunlop... ...	1	1	0
Dr. Freeland Fergus ...	3	3	0
Professor John Ferguson	2	2	0
Dr. William Findlay ...	1	1	0
Dr. James Finlayson ...	26	5	0
Dr. J. F. Fleming	1	1	0
Dr. Wm. J. Fleming ...	3	3	0
Sir W. T. Gairdner, K.C.B.	10	10	0
Dr. W. F Gibb	1	1	0
Professor Glaister	1	1	0
Dr. David Grant	0	10	0
Dr. Green (London) ...	0	10	6
Dr. Andrew J. Hall ...	1	1	0
Dr. James C. Herbertson	1	1	0
Dr. J. Ewing Hunter ...	1	1	0
Dr. Arthur J. Hutchison	2	2	0
Dr. Wm. R. Jack	1	1	0
Mr. Thomas Johnston...	10	10	0
Dr. A. Brown Kelly ...	3	3	0
The Right Hon. Lord Kelvin, G.C.V.O. ...	3	3	0
Mr. John G. Ker	1	1	0
Mr. William Ker	10	10	0
Dr. D. Hamilton Kyle...	1	1	0
Dr. Peter M'Bryde ...	0	10	6
Mr. John M. M'Callum	1	0	0
Mrs. A. T. Macdiarmid	5	5	0
Professor Macewen ...	5	0	0
Professor M'Kendrick ...	3	3	0
Dr. George M'Kerrow ...	2	2	0
Mr. James J. MacLehose	5	5	0
Mr. Robert MacLehose	5	5	0
Dr. Quintin M'Lennan	1	1	0
Dr. A. Lewis M'Millan...	0	10	0
Dr. Donald Macphail ...	1	1	0
Mr. James Maitland ...	1	1	0
Dr. Archibald E. Malloch (Hamilton, Ontario) ...	20	0	0
Mr. James Mann	5	5	0
Rev. T. H. Martin	2	2	0
Dr. A. E. Maylard	5	5	0
Dr. George S. Middleton	10	10	0
Dr. T. K. Monro	1	1	0
Professor Gilbert Murray	1	1	0
Dr. Alex. Napier	2	2	0
Dr. David Newman ...	26	5	0
Mr. Adam Nimmo	2	2	0
Dr. Wm. Osler (Baltimore)	10	10	0
Dr. James Parker	1	1	0
Dr. R. S. Penman	0	10	6
Dr. A. Maitland Ramsay	2	2	0
Professor William Ramsay, F.R.S.	2	2	0
Mr. James Reid	2	0	0
Dr. Wm. L. Reid	10	10	0
Dr. J. C. Renton	5	5	0
Rev. F. H. Robarts	2	2	0
Dr. Alex. Robertson ...	1	1	0
Mr. J. W. Robertson ...	2	2	0
Mr. William Robertson	1	1	0
Dr. J. B. Russell	2	2	0
Dr. Henry Rutherfurd ...	5	5	0
Professor Smart	2	2	0
Dr. Robert Somerville ...	2	2	0
Dr. J. Lindsay Steven ...	10	10	0
Dr. William Stewart ...	0	10	6
Professor Stockman ...	2	2	0
The Very Rev. Principal H. Story	5	5	0
Dr. L. R. Sutherland ...	5	5	0
Dr. M. H. Taylor	0	10	6
Dr. John H. Teacher ...	2	2	0
Dr. G. P. Tennent... ...	2	2	0
Mrs. Henry G. Thompson	5	5	0
Mr. William Tulloch ...	26	5	0
University Club	30	9	0
Dr. Ernest A. Walker (New Plymouth, N.Z.)	1	1	0
Dr. Robert Weir	0	5	0
Dr. Alex. White	1	1	0
Mr. W. H. Whiting ...	1	1	0
Rev. Alex. Wylie	1	1	0
Dr. David Yellowlees ...	10	10	0
Dr. Alfred A. Young ...	1	1	0
Dr. J. Murray Young ...	0	10	6

THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY, LIMITED.

THE annual general meeting of this society was held at 12, New-court, Lincoln's Inn, on April 18th. The chair was taken by Dr. HERON, in the absence of Mr. JONATHAN HUTCHINSON, the President.

The annual report showed that a great proportion of members had during the year required the services of the society, proving the necessity that exists among medical men for taking coöperative measures for the protection of their professional interests or private characters. An important percentage of the cases undertaken by the society had their origin in accusations of *malpraxis* or negligent attention and in certain of these which attained to the dignity of a legal contest the society was able to show that the medical man had been wrongfully accused. The financial position of the society was shown to be sound and progressing and the reserve fund has substantially increased—i.e., from £433 to £748. The report also stated that the executive body of the society had under consideration the best steps to be taken with a view to promote adequate legislation for the regulation of medical practice and the protection of properly qualified medical men and expressed a hope that in the course of the year some definite progress might be made. Both the report and the balance-sheet were unanimously adopted.

Dr. F. L. HART, in seconding the adoption of the report, urged that the society should vigorously oppose the constant inroads made on the interests of the medical profession by lay combinations, school boards, boards of guardians, &c. He thought that matters such as these should be taken up by the larger and more powerful societies instead of being left to small local associations. He emphasised the great advantages of combined effort.

The CHAIRMAN, in reply, said that the Council were always willing and prompt to help any member who was unjustly attacked, but it was necessary to use great caution before entering into conflict with school boards or other large and wealthy bodies, especially while the society had a reserve fund of not more than £1000.

Dr. H. G. THOMPSON contended that the Council had much useful work to do in defending the interests of members who were attacked and said he thought that that was their chief duty rather than fighting with large corporations.

Dr. HUGH WOODS said that medical men were constantly giving themselves away by consenting to give certificates for the use of school boards and other bodies without receiving any payment for them. The school board quickly made use of the services of medical men, leaving them to get what fees they could from the parents of the children. In his opinion medical men should refuse to give these certificates unless properly paid for them by the board for whose purposes they were employed. School boards endeavoured to obtain from medical men statements of the precise nature of the diseases from which children were suffering, and seemed to expect that medical men would gratuitously run the risk of an action for libel by certifying the existence of such diseases as, for instance, hereditary syphilis. School boards insisted on medical men filling up printed forms rigidly drawn up and then calmly left them to get their fees how and when they might. He did not see how the London and Counties Medical Protection Society could help medical men who gave themselves away in this manner, but if a member of the society refused to do work for a school board or other body without proper remuneration and was unfairly dealt with in consequence the Council of the society would most assuredly take the case up.

Dr. MAJOR GREENWOOD pointed out that school boards compelled parents to produce certificates and if the medical man to whom the parents applied happened to be their club attendant he was practically bound to give a certificate although the school board paid him nothing for it. He considered it an evil and vicious system all round and believed that the trouble arose in a great measure from the existence of cheap contract work.

The following officers were elected for the coming year. President: Mr. Jonathan Hutchinson. Vice-Presidents: Mr. Daniel B. Balding, Dr. H. Charlton Bastian, Mr. F. M. Beckett, Mr. Stanley Boyd, Dr. T. Lauder Brunton, Mr.

George Anderson Critchett, Dr. H. Radcliffe Crocker, Dr. David Ferrier, Mr. A. G. R. Foulerton, Dr. T. Colcott Fox, Dr. J. F. Goodhart, Mr. F. Greaves, Dr. Charles Scott Kilner, Mr. Edmund Owen, Sir R. Douglas Powell Bart., Dr. G. H. Savage, Mr. A. Marmaduke Sheild, Sir Thomas Smith, Bart., Dr. S. Sunderland, and Sir John Williams, Bart. Council: Dr. M. Baines, Sir Hugh R. Beevor, Bart., Mr E. C. Bensley, Dr. Robert Boxall, Mr. Andrew Clark, Mr. W. Bruce Clarke, Mr. C. M. Fegen, Mr. C. W. Glassington, Dr. Major Greenwood, Mr. C. E. Milnes Hey, Dr. E. Hooper May, and Dr. George W. Potter. Treasurer and Chairman of Council: Dr. George A. Heron. Hon. Secretaries: Dr. Hugh Woods and Mr. A. G. R. Foulerton. Auditors: Messrs. J. H. Duncan and Co.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

A MEETING of the Comitia was held on April 27th, Dr. CHURCH, President, being in the chair.

The following gentlemen having passed the required examination were admitted as Members of the College: Peverell Smythe Hichens, M.A., M.B. Oxon., L.R.C.P.; Arthur Latham Ormerod, M.A., M.B. Oxon., L.R.C.P.; and George Thornton, M.D. Edin., L.R.C.P.

Licences were granted to 116 gentlemen who had satisfied the examiners in the recent examinations.

The following communications were received: 1. From the late Dr. Hare, presenting the College with a gold angel piece of the time of Charles II. given to persons "touched" by the king for the king's evil. On the motion of the Treasurer, seconded by the Junior Censor it was resolved that a letter should be sent to Mrs. Hare acknowledging the gift and offering her the thanks of the College. 2. From the Secretary of the Royal College of Surgeons of England reporting certain proceedings of the Council on March 16th. 3. From the Mayor of Liverpool inviting the College to send delegates to the annual Congress of the Royal Institute of Public Health to be held in Blackpool on Sept. 21st to 26th. 4. From the British Balneological and Climatological Society submitting a syllabus of medical balneology, climatology, and geography, and urging "the inclusion of those subjects in the scope of medical study and examination."

The College then proceeded to the election of Fellows and after the ballot the following Members were declared to have been elected: Dr. Sydney Arthur Monckton Copeman, Dr. Wilfred James Hadley, Dr. Henry Handford, Dr. Percival Horton-Smith, Dr. Cyril Ogle, Dr. Arthur Ransome, Dr. William Halse Rivers Rivers, Dr. William John Ritchie Simpson, Dr. William Vicary Snow, and Dr. Herbert Ritchie Spencer.

A report was received from the Committee of Management. Its adoption was proposed by Dr. F. TAYLOR and seconded by Dr. ORD, and carried. The report referred to the recognition of the Royal University of Ireland as one of the universities whose students were entitled to exemption from the first and second examinations of the Board; the recognition of certain science institutions; the continued recognition of the late Mr. Cooke's School of Anatomy and Physiology; the examination in bacteriology for the Diploma in Public Health; the recognition of the Birmingham and Midland Eye Hospital; and the recognition of the course of laboratory instruction in public health at the Middlesex Hospital School of Medicine.

Two reports were received from the Laboratories Committee, one containing the official announcement of Dr. T. G. Brodie's nomination to the post of Director of the Laboratories.

The consideration of the report of the Midwives Bill Committee, postponed from the last meeting, was resumed. The report was as follows:—

Your committee, having carefully considered the Draft Bill "To promote the better training of women as midwives and to regulate their practice" referred to them by the College of Jan. 26th, 1899, beg leave to report as follows:

1. That the College be advised to affirm the general principle that it is desirable in the interests of the poor to promote by statute the examination and licensing of midwives.

2. That the College be advised to give its general approval to the Midwives Bill, 1899, without expressing any opinion with regard to the clause making penal the unlicensed practice of midwifery and reserving to itself the right of criticising the details of the Bill and making any representations it thinks fit at the proper time and in the proper place.

Dr. CULLINGWORTH moved that the report be received and adopted. This was seconded by Dr. WATT BLACK, and after some remarks by the PRESIDENT, Dr. HAYES, Dr. W. S. A. GRIFFITH, and Dr. CHAMPNEYS the resolution was carried.

The quarterly report of the FINANCE Committee was received and adopted and the list of books presented to the library during the past quarter was received and thanks were returned to the donors.

The PRESIDENT then dissolved the Comitia.

THE ROYAL SOCIETY CONVERSAZIONE.

ART as well as science was well represented in the gathering of visitors in the rooms of the Royal Society at Burlington House on Wednesday, May 3rd, on the occasion of the first annual conversazione. The President, Lord Lister, undertook the somewhat arduous duty of receiving the company, which included some well-known and distinguished people. It must be confessed that from the point of view of display the exhibition presented a decidedly dull aspect. There was, however, no lack of subject of real scientific interest, but there was a singular absence of that kind of demonstration which never fails to draw a large crowd of interested onlookers.

In this direction Mr. A. A. Campbell Swinton's exhibit was a notable exception. His experiments were of a brilliant kind, demonstrating some startling but impressive phenomena by means of the Wehnelt Electrolytic Contact Breaker. This new adjunct to electrical apparatus promises to lead to some interesting developments in regard to the electric discharge. The contact breaker is of the simplest possible construction. The current is passed through a cell containing dilute sulphuric acid in which is contained a large lead plate as cathode and a small platinum wire as anode. The interruption appears to be caused by the alternate deposition and discharge of oxygen bubbles on the anode, the gas acting alternately as an insulating sheath. The discharge of the current between the terminals of a large induction coil in which the ordinary contact breaker was cut out seemed particularly weird and vicious in character. The spark wreathed about like a green worm, the phenomenon being accompanied by the combustion of the nitrogen and the oxygen of the air into nitric acid. The spark even bridges the gap between glass terminals especially when warmed, the spark then exhibiting a brilliant sodium light. Mr. Swinton also showed a collection of vacuum tubes which were actuated by means of the same simple and ingenious contact breaker. An interesting machine demonstrating related phenomena was shown by Mr. W. R. Pidgeon, M.A., in the same room. The feature of this new influence machine, which is a modification of Wimshurst's invention, is that the induction starts almost instantly, its output is large, and it is not seriously affected by dampness or dust. As might have been anticipated the new electric incandescent lamp known as the Nernst lamp was exhibited in several styles. This lamp does entirely away with the necessity for a vacuum since the filament is not combustible and consists in fact of a thin rod of rare earths. But the current will not pass until the filament is warmed and this is now effected automatically by placing a thin platinum spiral in the circuit and close to the filament. Thus, on turning on the current the spiral becomes red-hot, heating the filament up to a point sufficient to start it in action. As soon as the filament glows and absorbs the current the platinum spiral cools down again. This system of lighting promises a distinct advantage over that now in use, for obviously it tends to establish the circulation of the air of a room. The average "life" of a rare earth filament is said to be 500 hours. Sir William Crookes's exhibit represented the years of research which he has devoted towards the separation of the rare earths. Associated with yttrium he now finds a new element which he has called victorium. Its atomic weight is probably near 117. The exhibitor also included the well-known phenomena of phosphorescent spectra in which the ruby, emerald, diamond, alumina, and other substances give splendid and pretty effects. The results of a similar line of research formed the subject of exhibition by Professor W. N. Hartley, F.R.S., and Mr. Hugh Ramage, F.C.S. The spectrum of gallium

was shown, the results leading to the conclusion that this metal must be present in the sun. The exhibit included some examples of the application of photography to the minute chemical analysis of minerals and metallurgical products. Amongst microscopical objects, those which attracted the chief interest were the mounted specimens by Dr. Patrick Manson and Major Ronald Ross, I.M.S., illustrating the development of filaria nocturna (Manson) and of proteosoma grassii (Labbé), parasites concerned in the spread of malaria. Microscopic specimens of mosquitoes were also on view showing the growth and development of these parasites in the tissues. Another illustration of the way in which disease may be spread was given by some excellent photographs taken by Major David Bruce, R.A.M.C., depicting certain districts in South Africa affected by the tsetse fly disease. An interesting phenomenon was shown by Mr. Shelford Bidwell, F.R.S., bearing upon the causes of multiple vision. Owing to the fact that the eye cannot accommodate itself to discern certain bright objects the image appears to be not merely blurred, but multiplied. Thus the number of distinct images of an incandescent electric lamp filament seen through a lens from a distance of a few feet may amount to about 400. This phenomenon is attributed to the cellular structure of the transparent media of the eye and may be imitated, as was demonstrated, by means of a lens covered with a few layers of gauze. All doubt as to how the natural curliness of the hair is produced was set at rest by a convincing and ingenious model shown by Professor Arthur Thomson of Oxford. An interesting series of natural colour photographs of zoological and botanical subjects, mostly from life, were exhibited by the author, Mr. W. Saville-Kent. Close by were some interesting specimens illustrating the fruits of the important research on the spinal column associated with the name of Professor E. A. Schäfer, F.R.S. Thus there were specimens showing that after hemisection of the spinal cord Clarke's column undergoes atrophy on the same side below the lesion, that the fibres of the pyramidal tract terminate at the base of the posterior horn and in Clarke's column and not in the anterior horn, and lastly specimens showing that the fibres of the descending antero-lateral tract terminate in the anterior horn. Dr. Sorby, F.R.S. showed an ingenious way of preserving marine animals in a fully expanded condition. The method simply consists in adding a little menthol to the sea water in which the animals are living when they will die and remain distended for the purposes of being mounted in balsam for lantern slides. The Marine Biological Association gave their customary interesting exhibit. The subject selected illustrated the different methods practised for securing food. An interesting pyrometer was shown by Professor H. L. Callendar, F.R.S., which in addition to recording temperature affords the remarkable result of being able to regulate the furnace to within one degree at 1000° C. Sir Norman Lockyer again interested many visitors by his remarkable photographs of stellar spectra, and close by was the photograph of the trail of a meteor, the first of its kind. The Jenner Institute of Preventive Medicine offered for inspection some very fine photomicrographic apparatus with high powers for use in the institution.

There were many other exhibits of a similarly interesting kind, but of a more technical character than those which we have described, and some of them were further illustrated by means of the electric lantern in the meeting room. The most remarkable, perhaps, of these demonstrations was that given by Mr. W. Duddell, which related to oscillographs. Thus, by means of oscillographs the actual waves of potential difference and current can be projected on the screen. The results are most beautiful and striking.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 6937 births and 3862 deaths were registered during the week ending April 29th. The annual rate of mortality in these towns, which had declined in the four preceding weeks from 23·1 to 18·3 per 1000, further fell last week to 17·7. In London the rate was 16·9 per 1000, while it averaged 18·1 in the 32 provincial towns. The lowest rates in these towns were 11·3 in Gateshead, 12·5 in Burnley, 13·1 in Swansea, and 13·9 in Croydon; the highest rates were 20·9 in Liverpool, 22·9 in Sunderland, 23·2 in Manchester, and 27·6 in Wolverhampton. The 3862 deaths included 383 which were referred to the principal zymotic diseases, against 379 and 384 in the two preceding weeks; of these, 120 resulted from whooping-cough, 114 from measles, 61 from diphtheria, 32 from diarrhœa, 30 from scarlet fever, 25 from "fever" (principally enteric), and one from small-pox. No death from any of these diseases was recorded last week in Gateshead; in the other towns they caused the lowest death-rates in Brighton and in Newcastle-upon-Tyne, and the highest rates in Wolverhampton, Manchester, Salford, and Blackburn. The greatest mortality from measles occurred in Bolton, Manchester, and Salford; from scarlet fever in Derby and Halifax; from whooping-cough in Cardiff, Plymouth, Birkenhead, Burnley, and Hull; and from "fever" in Wolverhampton. The 61 deaths from diphtheria included 26 in London, 10 in Sheffield, six in Leeds, four in Leicester, and four in Manchester. One fatal case of small-pox was registered in Hull, but not one in any other of the 33 large towns; and three small-pox patients were under treatment in the Metropolitan Asylums Hospitals on Saturday last, April 29th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of last week was 2131 against 2126 and 2144 on the two preceding Saturdays; 226 new cases were admitted during the week, against 150, 163, and 189 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 343 and 277 in the two preceding weeks, rose again last week to 294, but were 56 below the corrected average. The causes of 39, or 1·0 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Nottingham, Manchester, Bradford, Leeds, and in 17 other smaller towns; the largest proportions of uncertified deaths were recorded in West Ham, Liverpool, Salford, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the four preceding weeks from 23·3 to 18·1 per 1000, rose again to 21·1 during the week ending April 29th, and exceeded by 3·4 per 1000 the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 17·0 in Edinburgh and 17·9 in Greenock to 22·8 in Glasgow and 28·8 in Perth. The 644 deaths in these towns included 30 which were referred to measles, 22 to whooping-cough, 11 to diarrhœa, five to scarlet fever, five to "fever" (principally enteric), and three to diphtheria. In all, 76 deaths resulted from these principal zymotic diseases, against 54 and 53 in the two preceding weeks. These 76 deaths were equal to an annual rate of 2·5 per 1000, which was 0·8 above the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of measles, which had been 13 and 20 in the two preceding weeks, further rose to 30 last week, of which 21 occurred in Glasgow, five in Aberdeen, and three in Edinburgh. The deaths from whooping-cough, which had declined from 30 to 13 in the four preceding weeks, rose again to 22 last week, of which 11 were recorded in Glasgow, six in Leith, and three in Edinburgh. The five deaths referred to different forms of "fever" corresponded with the number in each of the two preceding weeks, and included four in Glasgow. The fatal cases of scarlet fever, which had been seven and four in the two preceding weeks, rose to five last week, of which three occurred in Glasgow, where the three deaths from diphtheria were also registered. The deaths referred to diseases of the respiratory organs in these towns, which had been 136 and 119 in the two preceding weeks, were 117 last week, and were 20 below the number in the corresponding period of last year. The causes of 28, or more than 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 33·4 and 30·1 per 1000 in the two preceding weeks, further declined to 29·7 during the week ending April 29th. During the past four weeks the death-rate in the city has averaged 31·5 per 1000, the rate during the same period being 18·4 in London and 17·6 in Edinburgh. The 199 deaths registered in Dublin during the week under notice were within three of the number in the previous week, and included 12 which

were referred to the principal zymotic diseases, against 10 in each of the two preceding weeks; of these, eight resulted from whooping-cough, three from "fever," and one from diphtheria, but not one either from small-pox, measles, scarlet fever, or diarrhœa. These 12 deaths were equal to an annual rate of 1·8 per 1000, the zymotic death-rate during the same period being 1·7 in London and 1·0 in Edinburgh. The fatal cases of whooping-cough, which had declined from five to three in the three preceding weeks, rose again to eight last week. The deaths referred to different forms of "fever," which had been four and two in the two preceding weeks, rose to three last week. The mortality from diphtheria was below that recorded in any recent week. The 199 deaths in Dublin last week included 36 of infants under one year of age and 60 of persons aged upwards of 60 years; the deaths of infants showed a decline, while those of elderly persons slightly exceeded the numbers recorded in the preceding week. Ten inquest cases and seven deaths from violence were registered; and 65, or nearly a third, of the deaths occurred in public institutions. The causes of 12, or more than 6 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are announced:—Surgeons: R. T. Gilmour to the *Herald* and J. Stoddart to the *Vernon*.

ROYAL ARMY MEDICAL CORPS.

Captain Henry A. Berryman is placed on temporary half-pay. Captain Clement S. Robinson, half-pay, is placed on retired pay.

Lieutenant-Colonel May and Major Fitzgerald are transferred to the Cork District for duty. Lieutenants J. G. Gill and R. S. Rodger join the Depôt at Aldershot for a course of instruction. Major H. A. Cummins proceeds to Woolwich for charge of the hospital for soldiers' wives there. Lieutenant W. B. Winkfield proceeds to Aldershot for duty. Lieutenant A. E. Weld embarks for Natal.

INDIA AND THE INDIAN MEDICAL SERVICES.

Subject to Her Majesty's approval Surgeon-Lieutenant-Colonel Matthew Denis Moriarty (Bengal) is promoted to the rank of Brigade-Surgeon-Lieutenant-Colonel. Major C. P. Lukis (Bengal) is appointed to be Joint Medical Officer of Simla. The services of Lieutenant-Colonel J. Anderson (Bengal) Civil Surgeon, Simla, are replaced at the disposal of the Government of the North-Western Provinces and Oudh. Major F. J. Drury (Bengal), Civil Surgeon, Chittagong, is appointed to be Professor of Pathology, Medical College, Calcutta, vice Major Evans. Captain A. F. Tyrrell, R.A.M.C., officiates as Personal Assistant to the Principal Medical Officer, Punjab Command, vice Captain Stanistreet, R.A.M.C., who is granted leave out of India on private affairs.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain E. A. Hughes having resigned his commission in the Volunteers, ceases to belong to the Army Medical Reserve of Officers.

VOLUNTEER CORPS.

Artillery: 1st Ayrshire and Galloway: Surgeon-Lieutenant A. J. Mackintosh resigns his commission; James Bryce Robertson to be Surgeon-Lieutenant. 3rd Middlesex: Surgeon-Lieutenant-Colonel J. Cook resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the corps on his retirement. *Rifle:* 1st Volunteer Battalion the King's (Liverpool Regiment): Surgeon-Captain R. G. Roberts resigns his commission. 5th Volunteer Battalion the South Wales Borderers: Surgeon-Lieutenant D. Edwards resigns his commission. 5th (Isle of Wight, Princess Beatrice's) Volunteer Battalion the Hampshire Regiment: Surgeon-Lieutenant V. J. Blake to be Surgeon-Captain. 1st Volunteer Battalion the King's Own (Royal Lancashire Regiment): Surgeon-Lieutenant R. O. Bowerman resigns his commission. 14th Middlesex (Inns of Court): Surgeon-Captain Herbert Murray Ramsay, late Scots Guards, to be Surgeon-Captain; Frederick Charles Wallis to be Surgeon-Lieutenant.

VOLUNTEER INFANTRY BRIGADE.

Lancashire: Surgeon-Lieutenant-Colonel C. W. Thorp, 2nd Volunteer Battalion the Lancashire Fusiliers, to be Brigade-Surgeon-Lieutenant-Colonel on appointment as Senior Medical Officer to the Brigade.

THE PHILIPPINE WAR.

There seems to be some probability that the campaign in the Philippines is drawing to a close now that the insurgents are suing for peace. The native population are sick of the war which is mainly maintained by Aguinaldo and other prominent insurgent chiefs for political ends. The terms already proffered by the Americans seem fair and reasonable and nothing is likely to be gained by further opposition. Meanwhile, General Lawton's brigade has had some hard fighting the details of which have not been reported owing to telegraphic communication with his force having been interrupted. There is, as might be anticipated, much sickness attributable to the heat and the climate. The Americans—mainly volunteers—have exhibited a good deal of vigour and gallantry but they are tired of the war. General Otis is not likely to make further concessions and the military force under his command will soon be receiving large reinforcements.

DEATHS IN THE SERVICES.

Captain Arthur Oldham Hubbard, I.M.S., on April 14th, at Cairo, aged 33 years. He joined the service in 1892 and was promoted Surgeon-Captain in 1895.

Deputy Surgeon-General George Farrell, C.B., late I.M.S., at Dublin on April 28th, aged 68 years. He served in the Afghan War of 1878–80, and in Burma in 1886–87, and retired in 1891.

Hon. Brigade-Surgeon John Gordon Grant, A.M.S., retired, at Bath on April 19th. He joined the Army in 1857, became Surgeon in 1873, Surgeon-Major in the same year, and retired with the honorary rank of Brigade-Surgeon ten years subsequently. He served in the Egyptian War of 1882 and was present in the engagement at El Magfar, at the two actions of Kassassin, and at the battle of Tel-el-Kebir (medal with clasp and Khedive's star).

SHIPPING ACCOMMODATION FOR INVALIDS RETURNING FROM FOREIGN STATIONS.

There is a growing conviction on the part of officers of the Army Medical Service that shipping accommodation should be specially provided and set apart for sick and invalid officers and soldiers proceeding home from foreign stations. The yearly number of these is large in the aggregate and the accommodation provided for them is not altogether sufficient or suitable for their requirements. We are consequently glad to observe that the *Army and Navy Gazette* of April 29th has called attention to this subject and that Dr. Farquharson has asked a question thereon in the House of Commons. The official answer, however, was not very satisfactory.

MILITIA MEDICAL STAFF CORPS DINNER.

Surgeon-Lieutenant-Colonel Collingridge, Commanding the Militia Medical Staff Corps, presided at the annual dinner of the corps at the Trocadéro on Saturday last, April 29th. Amongst the guests were the Director-General of the Army Medical Department, Surgeon-General O'Dwyer, Colonel Allin, Colonel Grier, Surgeon-Lieutenant-Colonel Squire, Major Bedford, and Major Dodd.

DEATH OF A CRIMEAN VETERAN.

By the death of Mr. Carte, of the Royal Hospital, Dublin, another of the Army medical men of the Crimean epoch disappears. He was appointed in August, 1858, Physician and Surgeon of the Royal Hospital. The appointment rendered vacant by the death of Mr. Carte is to be filled by a medical officer on the retired list.

In addition to the names of gentlemen nominated as Surgeons-on-Probation for the Royal Army Medical Corps given in the service column of THE LANCET, April 22nd, the following nominations are announced:—Howard Ensor, M.B., B.Ch., B.A., Dublin University; Thomas Campbell Mackenzie, L.R.C.S. & P. Irel., City Dublin Hospital.

QUEEN VICTORIA JUBILEE INSTITUTE FOR NURSES.—The ninth annual meeting of the Cardiff branch of this association was held recently. The report showed that 1216 cases were nursed and 37,498 visits were made to patients. Dr. Sheen (the honorary treasurer) reported that the income amounted to £883 and that there was a favourable balance remaining of £143.

Correspondence.

"Audi alteram partem."

"THE TUBERCULOSIS PROBLEM IN THE UNITED STATES."

To the Editors of THE LANCET.

SIRS,—In your esteemed journal of March 4th you honour me with quite an extensive review of my article on the Tuberculosis Problem in the United States which appeared in the *North American Review* of February. While you speak most kindly and approvingly of my opinion in regard to calling *pulmonary tuberculosis only a highly communicable instead of a contagious disease since the contact per se of a clean tuberculous invalid cannot convey the disease to others*, I must ask you to allow me to reply to your criticism on a few other passages of my article.

To my statement that *tuberculosis is the disease which the power of man could cause to disappear from the world with more certainty than any other* you say: "We believe that most medical authorities would consider small-pox, typhus fever, and rabies far more preventable than tuberculosis." To this criticism I should like to say that if the sanitary authorities would be as eager to take care of and treat, or even isolate, a refractory or helpless tuberculous patient as they are to take care of, treat, and isolate a small-pox, typhoid fever, or hydrophobic patient there is no doubt in my mind that pulmonary tuberculosis would ultimately become as rare as the above-mentioned diseases. In reviewing my plan as to the best means to attain this very desirable end you consider as a very drastic proposal my suggestion that a committee composed of physicians and laymen should report in full to the sanitary authorities concerning the conditions of the patient's dwelling and suggesting its renovation or even destruction when it is evident that tuberculosis has become endemic owing to the condition of the soil or to other sanitary defects. You continue and say: "We doubt whether any sanitary authorities would ever consent to such extreme measures even if they could be proved necessary. A house might be deemed insanitary owing to the condition of the drainage, but to insist on its demolition would require a stronger authority than a committee formed on the lines which Dr. Knopf proposes." If the distinguished critic would have studied the topographical tables presented by Dr. Lawrence Flick of Philadelphia in his admirable report to the Medical Society of the State of Pennsylvania on the Contagiousness of Phthisis, and also the report on the "Action of the Health Department of New York in Relation to Pulmonary Tuberculosis" submitted to his honour the Mayor in 1897, he probably would have agreed with me that a thorough renovation of many of the buildings in the tenement districts of these two cities, New York and Philadelphia, where tuberculosis has again and again occurred during the last 10 years in spite of ordinary disinfection, would have to be considered as the only remedy. In using the word "renovation" I refer to substantial brick houses, where a general overhauling, especially of the plumbing, the laying of new floors, and the whitewashing of walls suffice to render the house sanitary. The destruction of a dwelling would be preferable in cases where the house is a small insanitary cottage built upon bad soil in a country town, inhabited by generations of tuberculous families. One must be familiar with the relative frequency of such buildings in some parts of the United States to appreciate my plea for a total destruction of them.

Finally, you say of my plan to deal with the tuberculosis problem among the poorer classes: "A suggestion is made which would be sure to meet with such strong opposition that its adoption would be almost hopeless—the committee [composed of physicians and laymen] is to determine the financial condition, whether the patient is or is not able to pay and whether or not by his being taken to an institution the family will become destitute. 'If the latter should be the case it would become an imperative duty for the municipality to provide for the family.' Considering the enormous prevalence of tuberculosis among those entirely unable to pay for the prolonged treatment necessary such a scheme can only be considered to be utopian." A tuberculous individual, especially in the more advanced stages, is a bread-winner to a poor family only in the rarest instances. In the majority of cases he is most likely to be a hindrance to them by demanding the care of another member of the family who, if the invalid would be removed, could aid in the support of the household. Thus cases where the families would become entirely destitute through the removal of a consumptive patient into an institution would be comparatively small. In reality, by taking care of all tuberculous poor, curable and incurable, either in sanatoria for the purpose of cure or in special hospitals for the purpose of isolation, I am convinced that the commonwealth would be the financial gainer in the end, even if the municipality should be for a time called upon to provide for the family whose bread-winner has been forced to a temporary absence by a sojourn in a special institution. With the ever-growing interest which the medical profession and all classes of society throughout the world take in the unhappy lot of the consumptive poor, my plan of dealing with them may after all not prove to be so very "utopian."

I would feel greatly indebted if you would give this letter a space in your valuable journal. Thanking you in advance for your courtesy,

I am, Sirs, yours faithfully,

New York, April 13th, 1899. S. A. KNOPF, M.D.

"OÖPHORECTOMY AND THYROID EXTRACT IN RECURRENT MAMMARY CANCER."

To the Editors of THE LANCET.

SIRS,—I agree with Mr. Stanley Boyd that the question of the power of oöphorectomy and of thyroid extract, separately or combined, cannot be settled at present. Larger experience is needed. Considered as organs for internal secretion I think the thyroid is as important as the ovary. Mr. Boyd says that thyroid cannot be borne as easily as peppermint-water. It can be well borne if the patient does not take too much. My patients have been told to lessen the dose if disagreeable symptoms arise. He speaks of thyroid having been left off in one case presumably because it did not seem to be doing any good. If it keeps off the cancer I call that doing good. I think that the only security for a permanent result is to maintain the condition of the body under which the cancer disappeared—that is, to keep up the excess of thyroid secretion for the rest of the patient's life.

I am, Sirs, yours faithfully,

Harley-street, W., May 2nd, 1899. G. ERNEST HERMAN.

"SPERMINUM POEHL."

To the Editors of THE LANCET.

SIRS,—I notice in the last number of THE LANCET a letter from Professor Halliburton in which he mentions an advertisement of Poehl's spermin in which my name occurs as well as his own, and without any authorisation whatever from me. A full explanation will, I believe, appear in this number of THE LANCET from Messrs. Zimmermann, Professor Poehl's London agents.

I am, Sirs, yours faithfully,

Stratford-place, W., May 3rd, 1899. T. LAUDER BRUNTON.

To the Editors of THE LANCET.

SIRS,—Having seen Dr. Halliburton's letter *re* sperminum Poehl I at once wrote to him and sent a copy of that letter to all the English medical men whose names appeared on the list mentioned by him. One of these gentlemen, while thanking me for so doing, made a suggestion that I should also send a copy to you. Anxious to do the best I can to remove any misunderstanding I take the liberty of doing so, leaving to you to do with it as you think best.

I am, Sirs, yours faithfully,

St. Mary-at-Hill, E.C., May 2nd, 1899. AUG. ZIMMERMANN.

[COPY OF LETTER SENT BY MR. ZIMMERMANN TO DR. HALLIBURTON.

London, 28th April, 1899.

DEAR SIR,—Professor Poehl came to see me for the purpose of having my assistance in the introduction of his preparation. On seeing the questionnaire I told him at once that the printing of the names of any English medical man I could under no consideration allow. He explained that he was entirely ignorant of practices in this country and since I objected to his printing the names he would certainly fall in with my suggestion and leave it to me to compile

a general *résumé* without mention of any English authorities. I suppose the packing you had originates from the continent, and as he bound himself to me to prevent any foreign packing coming here and also in future to strike out English names in his prospectuses used on the continent I do not think that you will in future have reason to complain. As to the commission of which that circular speaks he explained to me that this was not in existence, but that the Russian journal merely had proposed such a commission. Anyhow, he accepted my distinct terms as to English names.

I give you freedom to make use of this letter as you may think fit, and remain, dear Sir, Yours respectfully,

(Signed.) AUG. ZIMMERMANN.

"CHRONIC MEDIASTINITIS."

To the Editors of THE LANCET.

SIRS,—In a leading article in THE LANCET of April 29th you refer to the subject of mediastinitis upon which an interesting article by Dr. Whipham has recently appeared in your pages.[1] Valuable though the paper of Dr. Whipham is, I cannot say that it has strengthened my belief in mediastinitis as a pathological condition of any importance, apart from general adhesion of the pericardium, with which it is almost invariably associated. All the symptoms and physical signs attributed to the presence of mediastinitis may be produced by an adherent pericardium, and it seems unnecessary to assign to an increase of fibrous tissue in the mediastinum a name and a place in the category of diseases.

It is not easy to comprehend why increase of fibrous tissue in the mediastinum should produce physical signs. It can hardly produce obstruction of the inferior vena cava since that vessel passes almost immediately into the pericardium after piercing the diaphragm. If any vessel is to suffer it must be the superior vena cava. It is well known, however, that the superior vena cava may be much compressed without giving evidence of such pressure. It generally requires not only pressure from without but invasion of its wall and rapid encroachment upon its lumen, such as occurs when a mediastinal growth is present, before signs of marked venous obstruction occur. In my experience some degree of thickening of the tissues of the mediastinum has been present in the majority of cases of necropsies on cases of general adhesion of the pericardium, but I have seen no reason why the adhesion of the pericardium should not be looked upon as the only lesion to which any importance could be attached.

I am, Sirs, yours faithfully,

April 29th, 1899. THEODORE FISHER.

THE NOTIFICATION OF MEASLES.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of April 29th, p. 1178, under "Reports of Medical Officers of Health, Wigan Urban District," you say: "The voluntary notification of measles is in force in Wigan, but Mr. William Berry, the medical officer of health, is of opinion that the notification of the first case in a household has not been of use in preventing the spread of the disease." My opinion happens to be the converse. On p. 6 of the report in question you will find: "Measles was very prevalent at the commencement of the year and I do think that the system of voluntary notification of the first case has been of benefit in preventing its spread." Again, on p. 17: "Voluntary notification of measles is still in force and it places us in a position to know long before a death takes place the locality in which measles arises, besides enabling us to make an effort at isolation in the patient's house," and following this is an account of an epidemic of measles in one part of the town, our knowledge of the cases through early notification enabling us to take early action and have the school in the district closed, with an immediate decline of the outbreak; and following this I give a list of the notifications and the number of cases discovered by the inspector. In my previous annual report (1897), p. 16, you will find the following: "I do claim, however, that the action of the sanitary authority has diminished the spread of the disease and its mortality by the systematic visits paid, isolation, the supply of disinfectants, the fumigation of the rooms occupied by the patient, and the disinfection of the bedding. This practice has severely called the attention of parents to the dire effects of the disease." We are now in our third year of voluntary notification of measles and I am convinced that it has been of the greatest use in limiting the spread of the disease. If I had not held this strong opinion and that I am soon about to ask my sanitary authority to extend this voluntary notification for a further period of time I would not have troubled you with this letter, which I trust you will be able to insert in your next issue.

I am, Sirs, yours faithfully,

WILLIAM BERRY,

Wigan, April 29th, 1899. Medical Officer of Health.

[1] THE LANCET, April 1st, 1899, p. 822.

KITE *v.* GUNN.

To the Editors of THE LANCET.

SIRS,—In your able annotation on the case of Kite *v.* Gunn, an action raised at the last Manchester Assizes, you comment upon the anxiety and expense which the defendant must have undergone. Will you kindly allow me to state that the action was defended by the Medical Defence Union, of which society Mr. Gunn was fortunately a member, and all the expenses—naturally heavy—were defrayed by the Union. I am, Sirs, yours faithfully,

A. G. BATEMAN,

General Secretary of the Medical Defence Union.

4, Trafalgar-square, W.C., April 28th, 1899.

THE METRIC SYSTEM FOR THE PHARMACOPŒIA.

To the Editors of THE LANCET.

SIRS,—The following resolutions were unanimously passed at the last meeting of the Reading Pathological Society. They were proposed by Dr. Abram and seconded by myself.

I am, Sirs, yours faithfully,

Reading, April 30th, 1899. JAMIESON B. HURRY, Hon. Sec.

RESOLUTIONS.

(*a*) That the Reading Pathological Society is of opinion that the metric system should be definitely adopted in the next edition of the British Pharmacopœia.

(*b*) That the honorary secretaries be instructed to communicate the above resolution to the General Medical Council.

"A CRITICISM OF THE MORE COMMONLY EMPLOYED TESTS FOR ALBUMIN IN URINE."

To the Editors of THE LANCET.

SIRS,—In answer to Dr. Colquhoun's question in THE LANCET of April 29th may I state that if he will carefully read the first paragraph of my article on the tests for albumin he will find it stated that "the qualitative examination was followed in most cases by a quantitative estimation when albumin was found to be present." The estimation was usually made by a modified form of Devoto's gravimetric method; in a few cases alcohol was employed as the precipitating agent, as recommended by Hoppe-Seyler. If the methods which were employed in Dr. Colquhoun's laboratory were better than these I shall be glad to know the details of his experiments, as in this way the divergence of his results from my own and those of previous observers might be explained. With regard to Dr. Colquhoun's second paragraph I would remark that references judiciously given may answer some useful purposes. Not only do they call attention to accounts of recent work not yet embodied in the ordinary treatises, but they also enable the reader to distinguish between the writer's own experience and the statements of other authors which he quotes but has not personally verified.

I am, Sirs, yours faithfully,

P. J. CAMMIDGE.

St. Bartholomew's Hospital, E.C., May 1st, 1899.

"THE PHARMACY ACT, 1899."

To the Editors of THE LANCET.

SIRS,—THE LANCET is quoted by the *British and Colonial Druggist* (April 21st, p. 470) to the following effect: "It seems to us that if this Bill should become law a company could 'run' a hundred shops and yet retain the services of only one single qualified man to satisfy the requirements of the law. Thus in 99 shops medicines could be dispersed and poisons sold by the unqualified, the inexperienced, and the

ignorant." I am sure you would not allow your esteemed journal to be the means of circulating an erroneous impression and I therefore would like to point out that the Lord Chancellor's Pharmacy Bill only provides that a company may carry on the business of chemists and druggists provided it is *bonâ fide* conducted by a manager or assistant who is a duly registered pharmaceutical chemist or chemist and druggist. This of course refers to every place in which a company may carry on a business. That this is so is proved by the fact that in the memorandum accompanying the Bill the object of the Bill is stated to be to "place a company in the same position as the executors or trustees of a deceased druggist."

Under these circumstances a scheduled poison or a prescription or any preparation containing the least admixture of a scheduled poison could not be sold by any but a registered chemist under heavy penalties. There is no room for doubt on this point and the Lord Chancellor's is the only equitable solution of the matter. "The just claims of the craft" as claimed by the chemists—namely—

(1) The suppression of all companies trading as chemists and druggists and of drug departments of stores; and
(2) The absolute monopoly by chemists of the sale of every article which might be called a medicine—

the Lord Chancellor has not thought fit to adopt, they being too manifestly against the public interest.

I am, Sirs, yours faithfully,

Nottingham, April 24th, 1899. JESSE BOOT (per E.R.S.).

*** This view may be correct, but we fail to find any clause in the Lord Chancellor's Pharmacy Bill which justifies such an inference.—ED. L.

ACROMEGALY WITH INSANITY.

To the Editors of THE LANCET.

SIRS,—The annotation in THE LANCET of April 29th on a case of "Acromegaly with Serious Mental Symptoms," published in a contemporary, leads me to refer to a remark in the original article that "acromegaly appears to be extremely rare in asylums," the writer adding that he only knew one other case to have been in a British asylum. I think it cannot be so very rare in the insane, having within the last few years had at least two cases under my care. I say "at least two," for in two other cases there was a strangely mixed clinical aspect, partly acromegalic or acromegaloid. I am, Sirs, yours faithfully,

Grove Hall Asylum, April 29th, 1899. W. JULIUS MICKLE.

THE CONGRESS OF INTERNAL MEDICINE AT CARLSBAD.

(FROM OUR BERLIN CORRESPONDENT.)

THIS Congress was opened on April 11th by the President, Professor QUINCKE of Kiel, and closed on April 14th. The members were welcomed by representatives of the Austrian Government, the Mayor of Carlsbad, and the medical faculty of the German University of Prague.

Insufficiency of the Heart Muscle.

Professor SCHRÖTTER (Vienna) said that the heart possesses a reserve of energy by which it is enabled to support extraordinary exertions, but this stock of energy is sometimes inadequate and then functional insufficiency ensues. Functional insufficiency may also be congenital or even hereditary. A nervous influence also unquestionably exists, as appears in the insufficiency caused by psychical emotion and in death from "broken heart." The heart possesses a very complicated system of motor nerves which may be weakened by disease without alterations of the heart muscle. In the majority of cases, however, cardiac insufficiency is caused by anatomical alterations of the muscle, by parenchymatous or interstitial myositis following sclerosis of the arteries, or by acute infectious diseases. Over-exertion may produce permanent dilatation and insufficiency. Athletic exercises may be of such a nature and may be practised in such a way as to have a deleterious influence. Over-exertion of the heart muscle does not produce a sensation of fatigue similar to that felt in the muscles of the skeleton, but it manifests itself only by the occurrence of dyspnœa and general debility. With reference to athletic exercises Professor Schrötter said that the heart muscle was more liable to be overstrained by mountain climbing than by cycling, gymnastics, swimming, rowing, or walking; riding was the exercise least likely to produce overstrain. Patients suffering from myocarditis should be careful of themselves even when they feel quite well.—Professor MARTIUS (Rostock) said that in every form of heart disease the state of the muscle was an essential element in the prognosis. In acute infectious diseases cardiac debility was caused by acute myocarditis. Romberg and Dehio are of opinion that myocarditis is present also in so-called idiopathic cardiac enlargement. It is very doubtful whether functional debility of the heart exists without anatomical lesions. Schott and some other observers found temporary dilatation of the heart in athletes after engaging in certain exercises and this dilatation was connected with every symptom of cardiac insufficiency. A very characteristic feature of insufficiency is the contrast between the cardiac action and the pulse, the apex-beat presenting a heaving quality whilst the radial pulse was weak and sometimes almost imperceptible. Increase of the apex-beat combined with normal or augmented pressure in the arteries indicated that dilatation is compensated by hypertrophy, but if the arterial pressure is low, if the patient suffers from dyspnœa, acceleration of the pulse, and general debility, the heart-muscle is as a rule insufficient. Primary insufficiency of the heart muscle is more frequent than is generally supposed. The following forms may be distinguished: (1) acute relative primary insufficiency from over-fatigue in athletic exercises; (2) acute dilatation leading to so-called paroxysmal or essential tachycardia; (3) dilatation of a more chronic form caused by overwork in anæmic persons—a form very frequent in factory girls; (4) dilatation and cardiac debility in children, especially in those of scrofulous constitution; and (5) insufficiency caused by abuse of alcohol.—Dr. ROMBERG (Leipsic) said that functional troubles of the heart ought only to be inferred when no organic lesions were present. Functional irritation, such as terror or psychical troubles, may be prejudicial to a heart in a pathological condition. Cardiac insufficiency may be augmented by deficient nutrition, such as is practised in reducing methods of treatment and in strict anti-diabetic diet. Cardiac debility in corpulent persons depends on the contrast between the bulkiness of the body and the relatively small heart. The small size of the heart in phthisis is probably in connexion with the general emaciation of the patients.—Professor SCHRÖTTER'S address was followed by a long and animated discussion, joined in by Dr. SCHOTT (Nauheim), Dr. GROSSMANN (Vienna), Dr. HIS (Leipsic), Professor QUINCKE (Kiel), Professor POEHL (St. Petersburg), Professor VON BASCH (Vienna), and others.

Leukæmia and Leucocytosis.

Professor LÖWIT (Innsbruck) explained the differences between leucocytosis and leukæmia. An increase of the number of leucocytes is characteristic of both affections. Leucocytosis is only a symptom present in various diseases, whilst leukæmia is a special disease with a definite etiology. He then described the different forms of leukæmia and made very interesting observations on their etiology. In myelæmia he had discovered in the blood a parasite, hæmamœba leukæmiæ magna, which multiplies by spores. In lymphæmia parasites are seldom present in the peripheral blood, but in the glands there was a parasite, hæmamœba leukæmiæ vivax, very different from the one above mentioned. Sometimes both species are found together. Hæmamœbæ were also found in one instance of anæmia pseudo-leukæmica infantum and in one of pseudo-leukæmia. Leukæmia could be communicated to animals by inoculation; the animals died after several months. In the blood of the infected animals the leucocytes were greatly increased and in addition amœbæ were found. The infection could also be conveyed from one animal to another.—Professor MINKOWSKI (Strassburg) said that he had compared the chemical composition of lymphocytes and the polynuclear leucocytes. The nuclein substances of both cells proved to be nearly the same, but he found two different constituents associated with the nuclein, giving the biuret reaction, but not identical with protamin. Researches undertaken with a view to decide the question of the identity of leucocytes and lymphocytes were not yet concluded. From a clinical point of view the microscopical examination of the blood was sufficient for the diagnosis. The characteristic symptom of leukæmia was not the increased number of

leucocytes but the alteration of their structure, the polymorphy of the cells. Three forms of leukæmia could generally be distinguished: splenic, lymphatic, and medullar leukæmia. Professor Minkowski proposed the following classification. 1. Genuine leukæmia where the enormous swelling of the spleen is the most prominent symptom; in the blood those cells are increased which arise from the bone marrow. These cases are as a rule chronic, they generally remain stationary for one or two years and at last terminate fatally with hæmorrhagic symptoms. 2. Acute leukæmia with a slight swelling of the spleen only. Hæmorrhages in the skin and the mucous membranes are present in the first stage of the disease prior to the alterations of the blood. The leucocytes increase in number to an enormous degree, even sometimes equalling the erythrocytes. These cases end in death within a few weeks or days so that an infectious origin is very probable. 3. Chronic lymphæmia beginning with swelling of the lymphatic glands of the neck and followed by lymphoid hyperplasia of the spleen and the bone marrow. These lesions may exist without any obvious augmentation of the leucocytes in the blood. By and by, however, the recently formed lymphatic cells make their way out from the glands into the blood and the characteristic complications of leukæmia may show themselves. Professor Minkowski described three forms of leucocytosis: (1) lymphocytoses observed in gastro-intestinal catarrhs, in syphilis, measles, scarlet fever, &c.; (2) polynuclear neutrophilic leucocytoses following infectious diseases, such as pneumonia, septicæmia, erysipelas, scarlet fever, diphtheria, &c.; and (3) eosinophilic leucocytoses in pemphigus, trichinosis, and sometimes in malignant growths. The eosinophilic cells decrease in infectious diseases to reappear in convalescence. In conclusion, Professor Minkowski spoke of the treatment of leukæmia by injections of splenic extract, of spermin, of cinnamic acid, turpentine, &c.—In the discussion Professor GRAWITZ stated that he had never found amœbæ in leukæmia. The diagnostic and prognostic value of the different forms of leucocytes was rather uncertain as their origin was not known.—Dr. GUMPRECHT (Jena) said that leukæmia might be produced by a formation of new cells as well as by destruction of the leucocytes. At the outset of the disease the pain in the spleen was often erroneously ascribed to pleurisy.—Dr. KÜHNAU (Breslau) drew attention to affections of the kidney as a complication of leukæmia. Sometimes albuminuria was present with slight fever; after a few days uræmia occurred, leading to death. The necropsy showed parenchymatous nephritis caused, in his opinion, by toxic subtances in the leukæmic blood.—Dr. JACOB (Berlin) was of opinion that the nuclein acid of the leucocyte had a bactericide action.—Professor GOLDSCHEIDER (Berlin) pointed out that the bone marrow and spleen substance of healthy animals when injected into other animals caused well-marked leucocytosis, so that the injections of hæmamœbæ made by Professor Löwit did not furnish any proof of the infectious nature of these parasites.

The Gastric Juice.

Professor RIEGEL (Giessen) said that no substances having a sure and prompt influence on the secretion of the gastric juice had yet been discovered. He had studied the action of atropine on this secretion. He found that animals which had taken one litre of milk excreted about 16 cubic centimetres of juice within two hours. When atropine was administered only from one-eighth to one-tenth of this quantity was obtained and the acidity was diminished by about one-third, but under the influence of pilocarpin double the quantity of gastric juice was excreted. The same results were obtained in the human subject. He had administered atropine in more than 80 cases with a satisfactory result.—Professor ESCHERICH (Gratz) recommended atropine in infantile diarrhœa.

(To be continued.)

PORTHCAWL CONVALESCENT HOME.—The annual meeting of those interested in this institution was held at the Cardiff Town Hall on April 24th under the presidency of the mayor, Alderman T. Morel. The report showed that the receipts in 1898 were £1453 and the expenditure amounted to £1103. There still remains a deficit balance of £2500 on the extension fund. There were 738 patients admitted, the average period for which each remained in the home being 17 days. The cost of maintenance was 1*s.* 5*d.* per head per day. It was decided that a special committee should be appointed to devise means for raising funds to remove the debt upon the building.

THE FIRST INTERNATIONAL CONGRESS ON MEDICAL ETHICS (TO BE HELD AT PARIS, JULY, 1900).

(FROM OUR SPECIAL COMMISSIONER.)

A MINISTERIAL Decree issued on June 11th, 1889, proclaims that during the Universal Exhibition of 1900 an International Congress will be held in Paris, entitled "Congrès International de Médecine Professionelle et de Déontologie Médicale." A circular inviting the formation of a Committee of Patronage and "adhesions" to this Congress has been issued by the Minister of Commerce and 70 copies have been sent to prominent medical men and medical societies in England. But in consequence of the title some confusion has arisen and according to replies received from England it would seem that this Congress has been mistaken for the International Medical Congress. Not only is it quite separate from the Medical Congress, but it is the first international congress of this description ever held. In future the title of the Congress will be printed on all circulars in the three official languages, French, English, and German, and the English version will be "International Congress on Medical Ethics." This is not a literal translation but it is at once the briefest and the most correct rendering of the meaning intended. Practically it will be a congress organised so as to discuss the numerous and complex questions raised in the long series of special articles published by THE LANCET on "The Battle of the Clubs" and on "Hospital Abuse." This matter is too big to form a mere section of the International Medical Congress. It does not deal with the science of medicine; it deals with the profession of medicine not from the scientific but from the economic point of view. But, on the other hand, as many medical men are interested at once in the economic and scientific progress of the profession it has very appropriately been arranged that the two congresses shall be held the one immediately after the other. The International Congress on Medical Ethics will meet during the week commencing on Monday, July 23rd, and concluding on Saturday, July 28th, 1900. The International Medical Congress will be held during the week following, therefore those who are able to remain in Paris for a fortnight will be able to attend both congresses.

As the subject matter of the International Congress on Medical Ethics touches so closely the questions to which THE LANCET has given the greatest possible prominence during the last five years your readers will be glad to be able to obtain from headquarters the fullest possible information. In securing this I have been courteously assisted by Dr. Jules Glover, 37, rue du Faubourg Poissonnière, Paris, who is the general secretary and to whom all communications should be addressed. Thus I am now able to state that, according to a Ministerial Decree dated Dec. 19th, 1898, the Commissioner-General of the Universal Exhibition has nominated a Commission of Organisation for the Congress. This commission meets at the Administration Offices of the Universal Exhibition, Avenue Rapp, and is able to announce that the members of the Congress will participate in all the advantages offered to the delegates and members of the official congresses. It is somewhat too soon to be able to state in what these advantages will consist; but they will in any case comprise a very large reduction in the fares on the French railways and the members will also participate in that bounteous hospitality which on such occasions has always distinguished the French nation. But as this is a congress dealing especially with economic questions every possible measure will be taken to reduce the expense of attendance. Thus the subscription is less than that generally charged for scientific congresses. It is fixed at 15 francs or 12*s.* for active members or delegates. An ordinary English postal order can be sent and should be addressed to the treasurer of the Congress, M. Pierre Masson, éditeur, 120, Boulevard Saint Germain, Paris. "Titular" members of the Congress have to pay a subscription of only 10 francs, or 8*s.* They comprise the wives and families of the delegates and medical students. They will enjoy all privileges accorded to full members and can assist at the public meetings but may not take part in the discussions. In exchange for their subscriptions the members will receive a card

of membership, all the circulars, programmes, &c., and ultimately the volume which the Government will issue containing a full report of the proceedings of the Congress. On presenting the card of membership at the French railway station booking offices the members will be accorded the reduction in the railway fares to be agreed upon between the Government and the railway companies.

The question arises and must not be neglected whether the English railway companies should not also come to terms with the French Government for a similar reduction on the English lines. In any case—and this would not cost the English companies a single farthing—arrangements might be made to enable the English delegates to book their luggage through to Paris though only holding tickets for the French ports where they intend to land and there obtain a French ticket at the reduction for the rest of the journey. There is time on landing to purchase this ticket but there would scarcely be time to claim the luggage, to have it examined by the Custom House officials, and then to have it weighed and again registered. It should not be difficult to avoid such complications and it would be to the advantage of the railway companies as well as of the passengers to avoid the extra labour and trouble involved in registering the luggage twice over—namely, at the point of departure in England and at the port of landing in France.

The Organising Commission of the Congress has for its president Dr. L. Lereboullet, member of the Academy of Medicine, general secretary of the General Association of the Medical Practitioners of France. The vice-presidents are: Dr. Robert Jamin, president of the Medical Society of the Ninth District of Paris and vice-president of the Syndicate (or union) of the Paris and Suburban Medical Practitioners. The general secretary is Dr. Jules Glover, as already mentioned, and the assistant secretary Dr. Paul Gaston of Paris. The treasurer is M. Pierre Masson. The Commission comprises such well-known medical men as Dr. Brouardel, dean of the Paris Faculty of Medicine; Dr. Bergeron, Dr. Cornil, Dr. Napias, Dr. Albert Le Blond, President of the Union of Parisian Practitioners, and others.

The opening ceremony of the Congress will be held in the hall which is now in course of construction on the exhibition grounds and will be used for all the congresses, but the subsequent sittings will be held in the medical schools at the École de Médecine, Faubourg St. Germain. It may be well to point out that in the Latin Quarter living is cheaper than in the West-end, which is the district generally frequented by English visitors to Paris. Indeed, the Commission propose to issue a list of hotels in the Latin Quarter and their tariffs. It is intended that the discussions should follow upon the reading of papers or reports prepared and printed a long time in advance. The Commission is desirous of receiving these papers before Jan. 1st next. They must be written either in French, English, or German. Each paper must be followed by a brief summary of the facts and arguments adduced. This summary should not consist of more than 600 or 700 words. Then there should follow a resolution in view of the practical realisation of the object of the paper. The resolutions should be short and to the point and compressed into from 40 to 60 words or less. Both the summary and the resolution will be translated by the Commission into the two other official languages and will thus appear in the three languages of the Congress. The discussions, to be followed by a vote, will be on the resolutions proposed. The voting will be by nationality, each nation one vote, decided by the majority of its representatives. The Congress will be divided into four sections. The first will deal with the relations of medical practitioners with large bodies, the State, the municipalities, &c. This comprises: (1) relations with the State, organisations depending directly on the State, and the laws regulating medical practice; (2) medical service in respect of public assistance, poor-law, public hospitals, and private medical charities; (3) the position from the economic point of view of medical officers of health and other sanitary functionaries; (4) the relation of medical practitioners and the judicial authorities; and (5) the utilisation in times of war of the services of medical men whose period of military service has expired. Then comes the relations of medical practitioners with large bodies which do not depend on the State, such as insurance companies, railway and maritime companies, large industrial enterprises, mines, mills, factories, &c., provident and benefit societies, and private charities.

The second section will discuss the relations of the medical practitioner with his patients, his relations with dispensing chemists, with trained nurses, midwives, manufacturers of surgical appliances, and others. In this section, also, the question of medical practice by unqualified persons will be debated.

The third section will be devoted to the relations of medical practitioners with their colleagues—consultations, clinics and medical institutions, locum tenents, the sale of practices, the relations between medical practitioners of different nationalities, professional medical societies, the formation of medical unions or syndicates to defend the economic interests of the profession and other societies of medical men.

The fourth section is to discuss all that relates to mutual aid and assistance among members of the profession, such as insurance in case of illness, a fund for old-age pensions, and help for the widows and children of medical men.

Under these various headings some papers have already been promised. Thus Professor Grasset of Montpellier will bring forward a communication on the Fundamental Principles of what the French term Medical *Déontologie*, a term which embraces medical ethics and etiquette. Dr. Lande of Bordeaux will read a paper on Medical Provident and Insurance Organisations. Dr. Porson of Nantes will contribute a paper on Professional Defence. Dr. Cuylitz, the secretary of the Brussels Medical Syndicate, promises a paper on the Relations between the Medical Profession and Benefit Societies. Finally, Dr. Pollak of Vienna will read a paper on the Organisation of Medical Chambers or Unions and the results attained in various countries where such societies exist.

This enumeration of subjects suffices to show the comprehensive character of the Congress. It further proves that in all parts of the continent the necessity of organising the medical profession is keenly appreciated. Already a most enthusiastic response has been received from many countries. In England our long experience of self-government has taught us the utility and power of organisation. Medical unions have now been formed in several towns of Great Britain. It is most important that these unions should be represented at the Paris Congress so that they may profit by the experience acquired on the continent and add to this any light which they may be able to throw on the subject. On the other hand, individual medical practitioners living in districts where as yet no medical union has been formed will also be welcome, for they will be able to explain from their own experience how much such unions are needed. They will then be able to return to their respective districts armed by the strong resolutions which are sure to be adopted at the Congress. They will be able to speak to their colleagues on the necessity of forming unions and to base their arguments on what was said and done by the delegates representing the profession in all parts of the civilised world. This will add a great moral force to their endeavours; and after the Paris Congress it should be easy to form medical unions where as yet such associations do not exist. There is nothing better calculated to inspire courage and confidence than the knowledge that others are fighting for the same cause. The Paris Congress will assist the spread of this useful knowledge. It therefore deserves the best and most active support at the hands of the profession. The secretaries of all medical unions and societies, by whatever name they may be known, which are constituted to defend the economic interests of the medical profession, should at once place themselves in communication with Dr. Jules Glover, the general secretary of the forthcoming International Congress on Medical Ethics. Those who desire to read papers or move resolutions at the Congress cannot notify the fact too soon. All such matters have to be organised a very long time in advance; and to arrive late on the field is to very gravely compromise the chance of success. Nor is such delay fair towards the organisers of the Congress who cannot be expected to provide for everything at the last moment, but if the work is spread over a sufficient lapse of time it will be done and well done. This is an unique opportunity of placing on record an account of what has been accomplished in England, which would stand side by side with the descriptions of what has been achieved on the continent and appear in the official report of the Congress, thus constituting a lasting and important page in the history of the medical profession. It is to be hoped that the medical unions of England will not fail to accomplish their duty in this respect and at once take steps to this effect. They

have to decide by whom they shall be represented in Paris and what their representatives shall do and say at the Congress. This is a matter which must be taken in hand early in the day. All resolutions to be submitted and reports to be read for the introduction of a separate subject should be sent to the general secretary before January 1st next. If they are sent later they may be crowded out and no new subjects can be introduced or taken into consideration when once the final programme has been prepared and issued. It is therefore not too soon to carefully consider the questions at issue and to prepare for the Congress.

Paris, May 1st.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Scottish Association for the Medical Education of Women.

THE Scottish Association for the Medical Education of Women, which conducts the Edinburgh Medical College for Women, has issued its ninth annual report. The court of the association express their sense of loss by the death of Mr. J. Ritchie Findlay who had taken the greatest interest in the welfare of the association and who had acted for several years as its president and then as vice-president. The number of students attending the college had increased from 84 last winter to 101 during the winter session of 1898–99. The income of the college from class fees and matriculation fees was £1959 15*s.* 6*d.* Since 1894 the curriculum and classes of the college have been especially recognised by the University of Edinburgh as qualifying for graduation in medicine.

Royal Society of Edinburgh.

At a meeting of the Royal Society of Edinburgh held on May 1st papers were read by Dr. Alexander Galt, of Glasgow University, Dr. Carlier of Edinburgh, Lord Kelvin, Dr. O. Fuhrmann (communicated by Sir John Murray), Professor J. C. Beattie, and Professor Tait. The subject of Dr. Carlier's paper was Changes that Occur in Some Cells in the Newt's Stomach during Digestion. The paper was a study in cell physiology and showed that digestion began at the upper end of the stomach and passed in a wave down to the lower end. There was an interval of from one and a half to two hours between the beginning of the secretion in the upper and lower ends. The secretion in one cell lasted about four hours. The nuclei underwent changes, antecedent to the formation of the gastric ferment at the expense of the chromatic substance, and secretion came to an end when the chromatic material was exhausted. The chromatic substance was renewed by passage into the nucleus of material from the protoplasm, and when this was accomplished secretion could begin again. There was thus a kind of periodicity in the secretion. Cells undergoing division secreted and showed the same changes as cells which were not dividing. Nucleoli probably consisted of waste matter derived from changes in the chromatin. They were frequently extruded.

Fever Hospital for Kelso.

At a meeting of the Kelso Police Commissioners on May 1st a communication was read from the Local Government Board calling attention to the lack of hospital accommodation at Kelso for cases of infectious disease and urging the commissioners and local authority to approach the district committee with a view to combination in their scheme. The commissioners remitted the communication to a committee of the whole board.

May 2nd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Mercer's Hospital, Dublin.

AT a meeting of the Dublin District Council held on May 1st the following resolution was proposed by Alderman Russell:—

That the resolution of council of Oct. 19th, 1898, adopting Section No. 3 of the Term Presentments relating to hospitals be varied in so far as it imposes upon the board of Mercer's Hospital the obligation of appointing three representatives of the corporation on the board as a condition of their obtaining the annual grant of £300; and that Councillors M'Call, Murray, and Clarke be appointed by this corporation to attend the meetings of the Board of Governors of Mercer's Hospital as the representatives of this council and act on the visiting committee of the hospital; and that on an undertaking being received by the town clerk from the hospital authorities that the above-named gentlemen will be properly and regularly summoned to all board meetings of the hospital pending alteration of charter, that the city treasurer be authorised forthwith to pay over the said grant of £300 to the board of Mercer's Hospital.

He said that at one time the management of the hospital had been anything but good, but now that had been changed and the hospital management was such as they could approve of. He moved his resolution in the interest of the poor of the district. After considerable discussion the resolution was ultimately passed.

The Royal University of Ireland.

A committee of graduates of the Royal University has been formed to secure the return of Dr. J. Walton Browne (senior surgeon to the Belfast Royal Hospital) as a representative of Convocation in the Senate of the Royal University. The vacancy arises owing to the period for which Professor O'Sullivan of Cork was elected having elapsed, and in a circular just issued the secretaries of Dr. Browne's committee say: "The unsatisfactory position of university affairs in Ireland, the recently threatened changes, and the resolution of The O'Connor Don at the last meeting of the Senate of the Royal University and the voting thereon imperatively demand the careful consideration of the graduates." They claim that the present vacancy offers an opportunity for showing the views of the graduates. While objecting to the abolition of the Royal University they consider that a material alteration in its constitution and management is necessary. They think that a more liberal endowment is necessary for the Queen's Colleges and that if Government see fit to endow sectarian colleges it should be done openly and not, as at present, "in an indirect and underhand" manner through the Royal University. They recommend that the present system of appointing Fellows and examiners be abolished and that all appointments should be made on the ground of merit and experience, with a fair proportion of extern examiners. Dr. Browne having pledged himself to support these views the graduates are asked to support him. It appears that the place which Dr. Browne seeks has been held since 1881 without a contest by Dr. O'Sullivan who, his three years' period (for which he was re-appointed) having expired, now seeks re-election. A member of Convocation (the Rev. J. Darlington) publishes in the Dublin press a letter which he has sent to the secretaries of Dr. Browne's committee, in which he points out that Convocation is represented on the Senate by six members; four of these come from Queen's College, Belfast, one from Cork, and one from Galway. He says that the election of Dr. Browne would give Belfast five senators, leaving the Cork graduates without a representative. Four of the six representatives of Convocation are Protestants and two have hitherto been Roman Catholics. Dr. Browne's election would make the proportion five Protestants to one Roman Catholic. The writer points out that Dr. Browne's committee are, consciously or unconsciously, trying to set at nought the honourable arrangement that one half of the governing body of the Royal University should be Roman Catholics—a condition loyally observed to the present. At present there are 18 Protestant senators, not including the Chancellor, and 16 Roman Catholics, two vacancies having occurred, one by the death of the Vice-Chancellor, Mr. Redington, and the other by the expiration of the three years' period of Dr. O'Sullivan. The election of Dr. Walton Browne, the writer says, would mean the establishment of a majority of 19 Protestants to 17 Roman Catholics, not including the Chancellor. In reply to a circular issued by Dr. O'Sullivan and the letter from the Rev. Father Darlington Dr. Walton Browne has addressed a communication to the members of Convocation in which he says that a representative of Convocation does not represent a college but the whole of the graduates of a university and they are entitled to know the views of the persons who are supposed to speak and act for them officially. He says that the northern graduates, having inquired directly about Dr. O'Sullivan's views (as revealed by the correspondence which he published), could not support him after his letter of April 14th. With reference to the question of representatives of colleges brought forward by Dr. O'Sullivan and of the religious sects referred to by the Rev.

Father Darlington in his letter of April 27th Dr. Browne wishes to say "that whatever Government may have done in relation to the Fellows and examiners I feel certain that the majority of the graduates recognise neither college nor religious profession at an election of a representative on the Senate."

New Regulations by the Public Health Committee of Belfast.

The Public Health Committee of Belfast have decided that in future there will be only four cleansings of ashpits in the year and householders who do not avail themselves of these stated opportunities must do the work at their own cost. Further, all trade refuse removed by the department is to be charged at the rate of 2*s.* per load. The truth is that the committee feel that the expenditure of the department, which has been creeping up gradually, must be restricted, as on all hands people in Belfast are crying out about the great increase in the municipal rates. A writer in the press has pointed out that in their proposed action the Public Health Committee have overlooked their liabilities under the fifty-third section of the Public Health (Ireland) Act, the wording of which is as follows: "If a sanitary authority who have themselves undertaken or contracted for the removal of house refuse from premises or the cleansing of earth closets, privies, ashpits, and cesspools, fail without reasonable excuse after notice in writing from the occupier of any house within their district requiring them to remove any house refuse or to cleanse any earth closet, privy, ashpit, or cesspool belonging to such house or used by the occupiers thereof to cause the same to be removed or cleansed, as the case may be, within seven days the sanitary authority shall be liable to pay to the occupier of such house a penalty not exceeding 5*s.* for every day during which such default continues after expiration of the said period."

Visit of the Irish Medical Association to Cork.

Heretofore the annual meetings of the Irish Medical Association have been held in Dublin but this year the association have arranged to make a new departure. The council have decided on holding every alternate general meeting in Dublin and in one of the provincial cities, and Cork has been selected as the place of meeting this year. The medical profession in Cork are devising means for giving a worthy reception to their visitors. Dr. N. J. Hobart, "the father of the profession" in Cork, has been appointed president of the association, a subscription list has been opened, and it is proposed to charter a special steamer to convey the members of the association down the river and round the harbour, due attention being paid to gastronomic requirements. The Council of the Queen's College have generously placed ample accommodation at the disposal of the association for the holding of their meeting and everything points to a successful and pleasant reunion.

May 2nd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Alcohol and Phthisis.

AT the meeting of the Hospitals Medical Society held on April 21st M. Jacquet informed the society that he had recently made an inquiry into the personal histories of the phthisical patients in his wards with reference to the question of alcohol. He had found that out of 17 patients 16 had been heavy drinkers for some years before their first attack of tuberculosis. They all were in the habit of drinking rum, brandy, or some kind of *apéritif*, and in addition were addicted to absinth. One patient used to take nothing but Amer Picon. In the course of from one to two years most of them reached the cavitation stage. This result is in opposition to the theory of some observers who have insisted on the tendency of phthisis in alcoholics to become fibroid, and it is certain that in phthisical patients there are many and various causes in action, such as, for instance, alcoholism or tuberculous tendencies in their ancestry. Thus two of M. Jacquet's patients, descended from alcoholic parents, had suffered from childhood with tuberculous manifestation elsewhere than in the lungs, such as lupus or tuberculous joint disease. The abuse of alcohol among the working-classes is so common that it is no wonder that phthisis should be also particularly common and virulent among their members. The results of the inquiry are, however, very striking and it is evident that alcohol, more especially in the form of absinth or *apéritifs*, is "bacilliphile" to a most dangerous degree. M. Jacquet concluded by hoping that his colleagues would give him the results of their own experience.—M. Hayem said that trustworthy statistics on this matter were very difficult to obtain; looking at the enormous number of alcoholics to be found in every section of the wards it was impossible to get accurate information as to the relation between alcohol and phthisis, and it would be just as easy to establish a definite relation between alcohol and diseases of the kidney or stomach. It would be remarkably instructive to take complete statistics of all the alcoholics in the hospitals at one time and the figures would be somewhat astonishing.

The Drink Traffic.

The amount of drunkenness and abuse of alcohol which is so universally deplored is due in great measure to the unfortunate law passed in 1880 by which the sale of drink was made free. Anybody can open a pot shop provided that he be of full age, have not incurred certain legal penalties, and have made a declaration at the *mairie*. Throughout France there were in 1880 drink shops to the number of 356,863, while to-day the number is just 500,000—that is to say, half a shop for every 50 inhabitants leaving children out of the question. The best measure of reform would undoubtedly be the repeal of the law of 1880. But there is one great difficulty in the way, and that is that the tavern keepers have become a great electoral power and those whose election depends upon universal suffrage dare not attack them. All the same, two courageous senators, M. Siegfried and M. Béranger, have just drafted a Bill to regulate drink shops and to diminish their numbers. This Bill proposes that the right to open a new drink shop or to continue selling in one already existing shall depend upon the authorisation of the Prefect acting under the Departmental Committee of the Conseil-Général and of the Attorney-General (Procureur de la République) Further, no drink shop where drink is consumed on the premises shall be allowed in any building where other trades are carried on or be in direct communication with such—a state of things constantly met with now. With a view to make the proposed licences not too easy of acquirement the two senators suggest that the Prefect should only grant one licence out of every three applied for so as to reduce the proportion of drink shops to one for every 300 inhabitants as regards Paris and the neighbourhood. Opening a public house without a licence shall be an offence punishable by a fine of from 16 to 1000 francs and compulsory closing. Heavy penalties are also proposed against keepers of cafés and public houses who supply women and girls, whether employed in their establishments or elsewhere, with opportunities for drinking, and if this is done the place can be closed by a police order. Even if this Bill should become law it will leave individuals every chance of getting drunk at home, but it would nevertheless do much to diminish opportunities for temptation and bad example.

"The New Idol."

A piece now running at one of the Paris theatres is the talk of the whole town. The author is one of the foremost of the new school of dramatists, M. François de Curel, and he deals on the stage with one of the gravest questions affecting the life of the present day man of science. The case is that of a medical man, one of the first of his profession, who in order to study the problem of the contagiousness of cancer and the possibility of preparing a serum for the treatment thereof inoculates that terrible disease into a poor girl lying in his hospital who, he considers, is bound to die from phthisis within a few days. The patient, however, recovers from her phthisis but the malignant disease becomes disseminated all over her. The matter gets into the press, the public is profoundly moved, and the physician is obliged to send in his resignation of his professorial chair, of his hospital appointment, and of his membership of the Academy. In a beautiful and moving scene with his wife who, associating herself with the public execration of her husband's acts, has announced her intention of leaving him he enters into a magnificent defence of the rights of the investigator and the worker for the good of the whole human race. If, he says, a general receives nothing but praise for bringing about the deaths of thousands of men, and those hale and sound, with a view to an empty conquest of territory or from a mistaken idea of patriotism, the man

of science who immolates one life already given up and useless, with the exalted motive of doing good to millions of other human beings has nothing wherewith to reproach his conscience. Such a victim is, he says, one of those unhappy ones who are crushed by the wheels of the car of the new idol, Science. Finally, as considering that the first human life of which he has a right to dispose is his own he inoculates himself. The play has given rise to lively discussions in the reviews owing to the extraordinary skill with which the author has set forth his thesis. As the piece was written and published three years ago it is remarkable that by a pure coincidence the matter should be so widely discussed at the very time when the experiments of Professor Neisser on the injection of syphilitic serum into healthy patients are the subject of such violent denunciation in Germany.

The Recent Plague Scare.

Some 15 days ago a report spread abroad that plague had broken out in Paris and that three cases had been notified as occurring among the employés of one of the most important linen-drapers in the city. This report was sedulously circulated by a paper written for women which is in marked opposition to such large business establishments which employ a large number of women at very low wages. The story was officially denied almost as soon as it began to get about, but public uneasiness was not allayed thereby. Therefore on April 28th M. Léon Colin in the name of the Conseil d'Hygiène made a formal declaration which was published in all the journals (by order of the police) in which it was officially stated that there had been no case of plague either in Paris or elsewhere in France. In order to give your readers first-hand information I myself applied to the Pasteur Institute and inquired at the laboratory there set apart for the study of plague, to which are attached the stables of Villeneuve de l'Etang, where are kept the horses for the preparation of Yersin's serum. The head of the laboratory, M. Dujardin-Beaumetz, told me in the most categorical fashion that no case of plague had been reported to him. This laboratory would certainly be the first place to be informed of such cases, for it is the only place in Paris which possesses any plague serum.

May 3rd.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Professor Koch in the Tuscan Maremma.

LAST week Professor Koch arrived at Grosseto, in the Tuscan Maremma, to resume the malarial studies initiated last autumn in Italy. Among the coadjutors accompanying him are representatives of the Government in its army, medical, and public health departments, Professor Gosio, Director of the State Hygienic Laboratories, being one of them. The Prefect of the Commune of Grosseto facilitates Professor Koch's work in every way and the Congregazione di Carità has placed at his service a number of rooms in the local hospital, one of which has been fitted up as a *gabinetto scientifico*.

"Cholera among Poultry."

The brief note on this subject contained in THE LANCET of April 22nd, p. 1128, must be supplemented by fuller and more precise details. There is no doubt that in the Alta Italia we are in the presence of a very grave and far-reaching malady, ruinous to poultry-farmers and fraught with risk to the public consumer. The origin of the disease has not been made out, while "cholera" appears to have been a name given to it without scientific sanction. At first it was said that chickens which had died from it might be eaten with impunity as "the cholera germ in poultry is not pathogenic in man." Thereafter deaths from the consumption of chickens so infected were announced, but even in these cases it was not ascertained whether the poultry consumed might not have been unsound from other causes. A typical illustration was thought to have occurred last week when at Settimo Torinese the young father of a family died within four or five days after dining heartily on *polli morti di colera* (fowls dead from cholera) with symptoms mainly gastro-intestinal and pulmonary. Two of his children who had also partaken of the poultry recovered from the same illness, but not without difficulty. Bacteriological research on the body of the deceased yielded negative results; nor was it more successful when followed up on the ailing fowls belonging to the same breed and lot as those which were alleged to have caused the man's death. Meanwhile in the bacteriological laboratory of the Turinese Ufficio d'Igiene large numbers of the "cholera" infected poultry were minutely examined. Rabbits, guinea-pigs, and healthy fowls and others of the feathered tribe were inoculated, but no "true specific germ" could be isolated such as the bacteriologist invariably finds in well-marked *colera dei polli*. The Turinese School, in fact, confessed itself baffled, when there came from Milan the announcement that bacteriology practised there with equal care and thoroughness was not more successful. Then the opinion was hazarded that the malady is not a true *colera dei polli* at all but an "epizoöia" inducing an infective disease characterised by "pneumonia exsudativa." Research on this hypothesis is now in progress and results are awaited with interest, not to say anxiety.

The Centenary of Spallanzani.

Nature study, up to its most refined developments in clinical observation and research, was largely represented yesterday at Scandiano, where the great naturalist, physiologist, and scholar, Lazzaro Spallanzani, died 100 years ago. Professor Todaro (Rome), Professor Mosso (Turin), Professor Bertolini (Bologna), Professor Pavesi (Pavia), and many others hardly less distinguished met to do honour to his memory and to inaugurate the *gabinetti scientifici* erected in the neighbouring Reggio Emilia to continue and commemorate his work. The Minister of Public Instruction was represented by Moleschott's successor in the Roman chair of Physiology, Professor Luciani, whose speech at the tomb of the hero of the day was in all respects worthy of his reputation. At the banquet which followed the Senator Giosuè Carducci ("the Tennyson of Italy") who holds the chair of Italian Literature in the University of Bologna, spoke in the poetic strain of which he is a master, but the occasion evoked no finer discourse than that of Dr. Tamburini, Professor of Psychiatry in the Modenese School, who in opening the *gabinetti scientifici* dwelt on Spallanzani's work as calculated (in the language of Lord Beaconsfield) "not only to commemorate but to inspire."

May 1st.

CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENTS.)

Bubonic Plague in Jeddah.

BUBONIC plague still exists in Jeddah, where since its first appearance on Feb. 23rd about 100 or 110 deaths have occurred. It may be said that the number is very small and as a consequence that the illness is of a very mild type, especially if there be taken into consideration the imperfect sanitary condition of Jeddah, the filthiness to which the town is abandoned, and the habits of the pilgrims who are now thronging for the Hedjaz and who have passed through Jeddah to the number of about 30,000. They are badly fed, excessively dirty, and broken down by the long journey and bad accommodation on board ship. Three cases of bubonic plague have occurred in Mecca; of these not one proved fatal. It is not known to what kind of treatment such patients are submitted—very probably to none. Besides, the population of Jeddah has been excited against the sanitary authorities and when the authorities tried to execute the orders given by the sanitary board for checking the spread of the epidemic riots broke out, the pilgrims were ill-treated, many stores and shops were plundered, and the physicians were obliged to hide themselves. They did not forget that last year one of them was grossly ill-treated in similar riots. The most curious thing is that the leaders of the riots were military men and employés of the sheriff. It is therefore conceivable that patients suffering from bubonic plague in Jeddah do not submit themselves to any treatment. The word "patient" does not include women. Up to the present date the sanitary news from the other provinces does not state that any outbreak of bubonic plague has taken place.

Public Health in Constantinople.

In Constantinople the death-rate is less than it was a few weeks ago. The number of deaths registered during the week ending April 17th was 283. During the week ending March 13th the number was 354, the highest number being 362 for the week ending Feb. 27th. The most fatal diseases

were acute inflammation of the lungs, small-pox, and typhoid fever. A few weeks ago H.I.M. the Sultan gave stringent orders to vaccinate and revaccinate the population of the capital. Unhappily there appears to be no diminution of the number of deaths from small-pox since the said orders were given. During the week ending Nov. 28th last five deaths from small-pox were registered. The same number was registered for the week ending Jan. 16th; 10 deaths from small-pox were registered during the week ending April 17th. The largest number of deaths from small-pox was registered for the week ending Jan. 23rd, 1899—namely, 23. Nearly the same number of deaths occurred from typhoid fever, which presented unusual hyperpyrexia. Among these there was one very sad case, that of a lady, the wife of one of the high officials of an Embassy, who in a fit of hyperpyrexia committed suicide. Always after the rains of March typhoid fever and other zymotic diseases break out, but this year such cases are more numerous than usual. This year the municipal authorities have left the town in a condition of the greatest filthiness. It is wonderful that bubonic plague has not yet broken out. The water-closets of the mosques also are in a very bad condition. In order to give employment to certain people the water-pipes by which water was supplied for the closets have been intercepted. Those who enter have to pay now for the water they need to men who sell it and if sellers do not get enough money they provoke the unhealthy condition of which I write. There are several cases of diphtheria which, however, are of a rather mild character. There are about 23 deaths registered every week. There is no doubt that this is owing to the lack of anti-diphtheritic serum which, unhappily, is not regularly provided to the druggists' shops, whence patients could obtain it easily, not being obliged to apply to the Institut Pasteur which is outside the city. A very interesting discussion on the efficacy of the serum took place at the last two sittings of the Medical Society of Constantinople.

Chemical Analysis in the Custom House.

The chemical analysis undertaken at the Custom House of the goods imported into Turkey has provoked the interference of diplomacy. Several meetings of the dragomans of the embassies and legations were held in order to discuss the affair. Several meetings of the Ambassadors themselves were also held and it is said that they protested against the said chemical analysis. The affair has not yet been settled. It is a very difficult question because not only are the Ambassadors and Ministers right in complaining of the Ottoman chemists who have very often declared best quality goods to be harmful to public health, but the Ottoman Government is perfectly right in objecting when, as it states, there has been seized, for instance, at the Salonica Custom House santonin which was a compound of 1 per cent. of santonin and 99 per cent. of crystallised boric acid. Sulphate of quinine has been seized containing more than 30 per cent. of water as well as other alien substances.

The Medical Schools of Beyrout.

The American Minister has asked the Sublime Porte for a special commission to be sent to Beyrout to be present at the final examinations of the American Medical College in that town. A similar arrangement has already been made for the French Medical School of Beyrout at whose final examinations a commission sent by the Imperial School of Medicine will be present. This new arrangement will no doubt put the only two provincial medical schools of the empire on a firmer and higher footing. So far the Government has tried to raise difficulties for the licentiates of these schools. Graduates of the Beyrout schools may come to Constantinople to have their diplomas authorised or signed in the usual way. They have, however, to work very hard at the metropolis. They have sometimes to wait for years before they can get the necessary permission to practise medicine in the Turkish empire. I have known Beyrout graduates who had practically to go through the whole course of the Constantinople medical school before obtaining the "official" diploma. A *viva voce* examination has, of course, to be passed by anyone coming from abroad, but that is simply nothing compared with the fate of Beyrout men. The *viva voce* examinations take place at the Imperial School of Medicine and are as a rule fair. The examiners, however, seem particularly opposed to Beyrout qualifications and to the American degrees in general. So that if the request of the American Minister be granted the American Medical College of Beyrout will undoubtedly draw large numbers of students from all parts of the country.

Turkish Delegates to Medical Congresses.

Dr. Djelal Mouhtar Bey has been nominated first delegate of the Imperial Government to the Medical Congress which is to meet at Brussels in September next. Dr. Mouhtar Bey is "Médecin Attaché" to the Imperial Palace, is one of the professors at the Medical School, and is chief of the sanitary service for the sixth circle of the municipality. The second delegate is Dr. Ahmed Fehmi Bey. The Government has appointed Dr. Feizi Pacha, Professor at the Imperial School of Medicine, and Dr. Djelal Ismail Bey to represent Turkey at the Medical Congress which is to meet on May 24th in Berlin under the patronage of the German Emperor.

The French Hospital.

Dr. Denis has just been nominated head surgeon to the French Hospital, a post which till lately was occupied by the late Dr. Larrien, who died from pneumonia. Dr. Denis was a pupil of the Lyon Faculté. He has for four years acted as an "interne" in the hospitals of that town and was appointed assistant teacher in pathology to the Faculté, and afterwards "moniteur" of the Obstetrical Clinic. He became assistant surgeon to the Lyon Hospitals in 1898. He brings with him seven years' hospital and scientific experience and will no doubt be a very useful addition to the French Hospital in Constantinople, which was so noted for its surgical department under the great operator, Dr. Lardy.

The British Seamen's Hospital.

Mr. John F. McClean, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed surgeon superintendent to the British Seamen's Hospital, Constantinople, in succession to Dr. John Patterson, resigned.

April 21st.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Diphtheria Antitoxin Treatment in Chicago.

THE Assistant Health Commissioner states that between Oct. 5th, 1895—the date of the first administration of antitoxin by the Health Department—and Feb. 28th, 1899, a period of nearly three and a half years, a total of 6342 reported cases of diphtheria were visited by inspectors; of this number 4311 were bacterially verified as diphtheria and 4076 were treated by them with antitoxin, the remaining 235 either refusing antitoxin treatment or being treated by other physicians, results not known; of the 4076 treated by the Department physicians 3795 recovered, 276 died, and five remained under treatment at the close of February, 1899. This gives a mortality rate of 6·77 per cent. in 4071 cases of bacterially-verified diphtheria cases treated with antitoxin. During November and December, 1898, and January and February, 1899, there were treated 100 cases in November, with 97 recoveries and three deaths, a mortality rate of 3·0 per cent.; in December, 119 cases with 115 recoveries and four deaths, a mortality rate of 3·36 per cent.; in January, 101 cases, with 94 recoveries and seven deaths, a mortality rate of 7·4 per cent.; and in February, 103 cases, with 92 recoveries and six deaths, and five remaining under treatment at the end of the month, a mortality rate of 6·1 per cent. of the completed cases in February. The totals for the four months are 423 cases treated, 398 recoveries, 20 deaths and five remaining under treatment on Feb. 28th; the average mortality rate was 4·78 per cent. in the 418 completed cases. There was no death among 129 cases on the first and second days of the disease and only three deaths among 114 on the third day, a mortality of 1·23 per cent. in 243 cases. The Commissioner also states that more than three years' experience has demonstrated that in this city at least the home treatment of diphtheria even in the most squalid and insanitary surroundings gives better results than hospital treatment, as shown by the reports of contagious disease hospitals in other large cities. The prime factor of success in the antitoxin treatment of diphtheria is the early injection of the serum. The delay caused by removal to hospitals by waiting the result of bacterial examination (as is done in many contagious disease hospitals) and by other more or less unavoidable routine hospital procedures more

than offsets the unfavourable conditions that obtain in homes, even of the poorest, where the antitoxin is carried promptly to the patient instead of carrying the patient to the antitoxin.

Food Inspection of the Board of Health.

In the report of the Sanitary Superintendent of the New York Department of Health for 1898 it is stated that 860,9631b. of bad meat were condemned and destroyed, 191,860 lb. of this being "bob" veal. Of fish no less than 1,232,894 lb. were seized and of fruit and other foodstuffs 7,746,959 lb. were condemned. The milk-supply is supposed now to be of a good average excellence. The daily amount sold in the city is 1,212,000 quarts of milk, 20,000 quarts of cream, and 10,000 lb. of condensed milk. The cows furnishing this supply are estimated to number 186,333 and are pastured in five states—namely, New York, New Jersey, Pennsylvania, Connecticut, and Massachusetts. Farmers within and adjoining the city limits supply 332,000 quarts of milk, the remaining 880,000 quarts being brought by rail. For the purpose of supervising and controlling the sale of milk the city is divided into districts, each of which is placed in charge of an inspector. The wholesale portion of the supply is inspected on the platform of the stations or in front of ferry-houses which terminate the railroads. As the cars used for transportation are especially adapted for the purpose, being provided with ice-boxes and heating apparatus to prevent souring in summer and freezing in winter, and the highest rate of speed is maintained, the milk-supply is delivered generally in good condition even from more remote points. The facilities provided by the railroads to shippers—namely, ice-boxes at shipping points and agents to care for the milk while awaiting transportation—also tend to keep the milk in good condition when delivered to the consumer. No person or firm is allowed to sell or deliver milk in New York city without a permit from the Board of Health.

Infection from the Hands in Phthisis.

It appears from a paper in a medical periodical that experiments have recently been performed at the Adirondack Sanatorium "not so much with the expectation of determining the degree of danger from the hands as to note the difference in respect to the presence of bacilli between otherwise cleanly persons using handkerchiefs and those depositing their sputum on cloths or in cuspidors." The investigations were carefully carried out, the subjects of the inspection being 18 patients in Adirondack Cottage Sanatorium and 10 private patients. One half of the private patients used cuspidors and occasionally their handkerchiefs. The rest used either cuspidors only or cloths. The sanatorium patients used no handkerchiefs. The following technique was used. Carefully cleansed, sterilised, plain glass finger-bowls with glass covers were used to catch from five to 10 cubic centimetres of sterilised 0·1 per cent. Na_2CO_3 solution which was poured between the palmar surfaces of the fingers while the patient rubbed them together in the bowl. Two small guinea-pigs were then used for inoculation with the washings of each private and of five of the sanatorium patients. One guinea-pig in each experiment was inoculated with 0·5 cubic centimetre in the peritoneum, together with an equal quantity in the right groin, while the other received 0·5 cubic centimetre in each groin. In eight out of 10 private patients one or both guinea-pigs became tuberculous. In two out of five sanatorium patients one guinea-pig each was found to have tuberculosis of very chronic type. The only two negative results which occurred among private patients were from women who were scrupulously careful by the use of cloths and cuspidors and frequent washing to keep the hands perfectly clean. On the other hand, the two who used handkerchiefs only were readily found to furnish infection. The writer draws the following deductions from these experiments: that living tubercle bacilli are not infrequently present on the hands of patients who are not careful in the use of handkerchiefs, cloths, and even cuspidors, when the expectoration is abundant; also that no precaution against contamination of the hands can avail better than the use of cuspidors, combined with frequent ablutions with soap-and-water; and that in the present usages of society people are not likely to use pocket-cuspidors except in institutions. Consequently, handkerchiefs will be used in public, especially since anti-spitting laws are forcing people to use them. There is, therefore, urgent need for a cheap, comparatively impervious and soft handkerchief which can be burned. This could be specifically recommended by physicians and boards of health for all diseases with expectoration. A rubber-cloth pocket lining which could be washed would also be a desirable addition to suits for invalids.

A State School of Public Health.

Among the Bills now before the New York Legislature is one calling for the establishment of a State School of public health in which scientific and laboratory investigations may be conducted to ascertain the character of infectious and contagious diseases and to analyse water, milk, and other food supplies. It also urges free instruction in sanitation and the prevention of disease to all members of local health boards where such instruction is sought. The Bill calls for an appropriation of $25,000 to fit up the building of the New York University situated at East Twenty-sixth-street, near First-avenue, for the use of such a school, and for $25,000 additional to purchase supplies for the school and necessary apparatus.

April 17th.

Obituary.

JABEZ HOGG, M.R.C.S. ENG., F.R.M.S.

MR. JABEZ HOGG died suddenly on April 23rd, at his residence, Palace Gardens-terrace, aged 82 years. He was the son of the late John Hogg of the Royal Dockyard, Chatham, and received his education at the Rochester Grammar School, as apprentice to a local surgeon, at the Hunterian School of Medicine, and at Charing-cross Hospital. He began life in London as a journalist, becoming a member of the staff of the *Illustrated London News* in 1843, and edited a series of illustrated educational books for the proprietors of that paper between the years 1850 and 1866. While thus cultivating literature and putting it within reach of the people Mr. Hogg was not neglectful of his vocation to science and medicine. His "Manual of Domestic Medicine" appeared in 1848 and in 1850 he obtained the diploma of the Royal College of Surgeons of England; subsequently at Mr. Guthrie's advice he studied ophthalmic surgery and attached himself to the Royal Westminster Ophthalmic Hospital, to which in 1855 he was appointed assistant surgeon, and in that capacity and as full surgeon he worked there for 25 years. From 1850 to 1895 he carried on his own medical practice at 1, Bedford-square, devoting himself particularly to diseases of the eye, but never relaxing his wider practice in and investigation of the other ailments of the human frame. During his riper years he produced many works—e.g., "English Forests and Forest Trees," 1853; "Experimental and Natural Philosophy," 1854; "The Microscope, its History, Construction, and Applications," 1854; "Histology of Dental Tissues," 1857; "The Ophthalmoscope," 1858; "The Vegetable Parasites of the Human Skin," 1859; "A Manual of Ophthalmoscopic Surgery," 1863; "Colour Blindness," 1863; "Boarding-out of Pauper Children," 1870; "The Treatment and Cure of Cataract," 1871–82; "A Parasitic or Germ Theory of Disease," 1873; "Microscopic Examination of Water," 1874; "Impairment of Vision from Spinal Concussion," 1876; and "Arsenical Wall-paper Poisoning," 1879–89. It is, however, by his work on "The Microscope," 1899, the instrument which he fondly loved, his aid in all researches, that he will be most remembered by the world of science. With unclouded brain in the last 12 months of his long and honoured life he set himself to bring out the fifteenth edition.[1] We find in the preface to the first edition (1854) the benign wish to diffuse learning among the people, "to contribute to the additional amusement and instruction of the family circle and aid the student of nature in investigating the wonderful and exquisite works of the Almighty." In 1898, looking back on the years intervening, he notes how the microscope, his constant companion for 60 years, had conferred benefits of untold value on the arts and industries of the country and had aided the special progress of every branch of science, while new forms of the instrument had been invented for chemical and analytical processes, for measuring crystals, for detecting mixtures of butter and other matters. To the end of his days Mr. Hogg believed in his early method

[1] THE LANCET, Feb. 25th, 1899, p. 524.

of using accurate pictures to explain the letterpress. In 1846 he was sub-editor of the *Illuminated Magazine*, to which Hablot K. Browne and John Leech both contributed; and he edited "The Illustrated London Almanack" for 51 years. He was first President of the Microscopical Society, Vice-President of the Medical Society of London, and Fellow of many learned bodies, both British and foreign. Becoming a Freemason in 1855 he attained the high offices of Grand Deacon and Grand Sword Bearer in Grand Lodge and always took the deepest interest in the craft. He will be missed in all ranks of society, where his advice, experience, and sympathy were always ready for the suffering. He was very cheerful and had full possession of all his faculties till his last moments; when awaking from sleep he entered on his everlasting rest after a few minutes of pain. He was buried in Kensal-green Cemetery on April 28th.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr Lambert von Babo, formerly Professor of Medical Chemistry in the University of Freiburg (Baden), in his eighty-first year. He published researches on a great variety of physical and chemical subjects—e.g., the Stereoscopic Representation of Microscopical Objects, the Connexion between the Density and the Viscosity of Liquids, and the Action of Uric Acid on Fehling's Solution.—Dr. Washington Ayer, formerly Professor of Hygiene in the University of California, San Francisco.—Dr. Jonquière, formerly Professor of Materia Medica in the University of Berne.—Dr. Espagne, *agrégé libre* in the Montpellier Faculty of Medicine.

Medical News.

UNIVERSITY OF DURHAM.—At the Third Examination for the degree of Bachelor in Medicine held at the College of Medicine, Newcastle-upon-Tyne, in April, the following candidates satisfied the examiners:—

Second-class Honours: Edward Turner Born and Frederick Percy Wigfield, College of Medicine, Newcastle-upon-Tyne. Pass List: Hedda Alstrom, London School of Medicine for Women; Laurence James Blandford and George Burrows Brown, College of Medicine, Newcastle-upon-Tyne; Henry Braund, Guy's Hospital; Edleston Harvey Cooke, St. Thomas's Hospital; James Willie Heslop, College of Medicine, Newcastle-upon-Tyne; Ralph Tennyson Jupp, Mason College, Birmingham; John Wilson Howard Morrison, John Robert Mitchell, and John Macfadyen, College of Medicine, Newcastle-upon-Tyne; Philip Meyler Perkins, St. Bartholomew's Hospital; Thomas Basil Rhodes, Mason College, Birmingham; and Stanley Raw, Eliot Swainston, William Waters Stainthorpe, and John Ernest Sidgwick, College of Medicine, Newcastle-upon-Tyne.

UNIVERSITY OF CAMBRIDGE.—At the congregation on April 27th the following medical and surgical degrees were conferred:—

M.B. and B.C.—J. L. Allen, B.A., and W. D. Harmer, B.A., King's College; J. H. F. Jerrard, B.A., Caius College; and S. E. Denyer, M.A., and A. N. Walker, B.A., Queen's College.

The jubilee of Sir G. Gabriel Stokes as Lumleian Professor will be celebrated by the University on June 1st and 2nd. Professor Cornu of Paris will deliver the Rede Lecture, congratulatory addresses will be presented by delegates of other universities and of scientific institutions, honorary degrees will be conferred, a commemorative gold medal will be presented to the veteran professor, and various festive gatherings will be held.—Professor MacAlister will give three historical lectures on Eponymous Structures in Human Anatomy on May 9th, 13th, and 16th at 12 o'clock. Vacancies for zoological workers at the University tables in the Naples and Plymouth stations will shortly be filled up. Applications must reach Professor Newton by June 1st. The High Steward (Lord Walsingham, F.R.S.) has generously offered a second (bronze) medal for original work in biology for the second candidate in the competition for the Walsingham (gold) medal, provided his merits are exceptional. Professor Sims Woodhead has been appointed an additional member of the Medical School Buildings Syndicate.

FOREIGN UNIVERSITY INTELLIGENCE.—*Amsterdam:* Dr. N. M. Josephus Jitta has been recognised as *privat-docent* of Ophthalmology.—*Chicago (College of Physicians and Surgeons):* Dr. F. Kreissl has been appointed to the chair of Surgery.—*Cracow:* For the professorship of Surgery and Directorship of the Surgical Clinic the name of Dr. Kader of Breslau has been selected by the Medical Faculty and the chair has therefore been offered to him. He was a pupil of Professor Mikulicz.—*Geneva:* Dr. Aimé Pictet has been appointed Professor of Biological Chemistry, Toxicology, and Pharmaceutical Chemistry.—*Iuriev (Dorpat):* Dr. Werner Zoege von Manteuffel has been promoted to be Extraordinary Professor of Surgery.—*Kazan:* Dr. Kazem-Bek Mirza has been promoted to the Ordinary Professorship of Medical Diagnosis.—*Kiel:* Dr. Ernst Paul Friedrich of Leipsic has been appointed to the newly-established chair of Otology.—*Lemberg:* Dr. St. Bondzynski, chief inspector of the Institute for the Examination of Food-stuffs, Cracow, has been appointed Extraordinary Professor of Hygiene.—*Marburg:* Dr. Heinrich Bonhoff of Berlin has been appointed Extraordinary Professor of Hygiene.—*Mexico:* Dr. Daniel M. Velez has been appointed Assistant Professor of Ophthalmology.—*Pennsylvania:* Dr. Flexner of Baltimore has been appointed Professor of Pathological Anatomy.—*Rostock:* The Professorship of Clinical Medicine has been filled by the appointment of Dr. Friedrich Martius, Director of the Medical Policlinic.—*St. Petersburg (Military Medico-Chirurgical Academy):* Dr. N. Chigaieff has been recognised as *privat-docent* of Internal Medicine.—*Vienna:* Dr. Karl Kunn has been recognised as *privat-docent* of Ophthalmology.

ROYAL INSTITUTION.—The annual meeting of the members of the Royal Institution was held on Monday afternoon, May 1st, the Duke of Northumberland, President, in the chair. The annual report of the Committee of Visitors for the year 1898, testifying to the continued prosperity and efficient management of the institution, was read and adopted and the report of the Davy-Faraday Research Laboratory was also read. The President then announced that in June next the Institution would complete 100 years of its existence, the first meeting of its members in the building in Albemarle-street having been held on June 5th, 1799, and that the managers had decided that the event should be duly celebrated by the delivery of two commemoration lectures. The first of these lectures would be delivered at 3 o'clock on Tuesday, June 6th, by Lord Rayleigh, when H.R.H. the Prince of Wales, Vice-Patron of the Institution, would preside and receive the honorary members; the second would be delivered at 9 o'clock on Wednesday evening, June 7th, by Professor Dewar, when the President of the Institution, would preside. It was further announced that the Lord Mayor had consented to give a reception to the members, foreign guests, and representative men at the Mansion House on the evening of Tuesday, June 6th.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—One of the leading features of the last meeting of this society, held at the Middlesex Hospital Medical College, on Friday, April 28th, was an exhibition of abnormalities of the stomach by Dr. Robinson, Professor Dixon, and Professor Bryce. All were in agreement as to the difficulty of saying what was the normal shape and size of the human stomach. A paper on the shape, size, and structure of the stomach and pylorus, as seen in 50 consecutive bodies, was read by Dr. J. A. Berry and Dr. J. Crawford of Edinburgh. They came to the conclusion that there was normally a valve at the œsophageal orifice of the stomach, probably functional, and that the pyloric valve was sometimes double or even treble.—Professor Arthur Thomson of Oxford showed a Model illustrating the mechanism which he believed caused the hair to curl naturally.—Dr. G. Elliot Smith read a paper on the Calcar Avis as a Character of the Mammalian Brain. It may be remembered that the late Sir Richard Owen held this to be a feature of the human brain, while Professor Huxley assigned it to all primate brains.—Professor Dixon brought drawings and specimens before the meeting to show that in bodies which had been preserved by fixing agents the empty bladder was a triangular flattened organ, the ureters entering at its lateral posterior angles.—Professor T. H. Bryce made the following contributions to the meeting: (*a*) A case in which a Sternalis, Sterno-clavicularis, and Chondro-epitrochlearis existed on the same side; (*b*) Duodenum presenting an Abnormal Flexure; (*c*) Brain showing an Unusual Disposition of the Convolutions of the Parietal Lobe; (*d*) Series of Sections of a Double Chick Embryo of Six Somites.—A

specimen in which the odontoid process of the axis articulated with the lateral mass of the atlas of one side was shown by the President, Professor Alexander Macalister, F.R.S.

DR. F. H. ALDERSON'S many friends will learn with pleasure that his youngest son, Mr. A. G. J. Alderson, recently of Epsom College, has been awarded an exhibition at Jesus College, Oxford.

MR. FREDERICK WEATHERLY, M.R.C.S. Eng., L.S.A., who has been a member of the Long Ashton Board of Guardians for the past 20 years, was on April 25th unanimously elected chairman of that board.

SINGULAR CONDUCT OF A DENTIST.—At Weston-super-Mare last week a visitor who was described as a dentist's assistant of Bath met a little boy in one of the quieter streets and requested him to "open his mouth and shut his eyes." This the lad did and before he was aware of what was going on a pair of dental forceps had extracted a molar tooth. Shortly afterwards the same proceeding was repeated with a second child. The police eventually arrested him and after being brought before a magistrate as a wandering lunatic he was allowed to leave the court under the charge of his friends.

EYE AND EAR HOSPITAL, BRADFORD, YORKS.—During the year 1898 no less than 6033 new patients were admitted. Of these 5224 were afflicted with diseases of the eye and 809 with diseases of the ear. The number of attendances was 16,600. 748 major operations were performed, including 77 extractions of senile cataract and 20 operations on the mastoid process. 740 in-patients were admitted. The average daily number of in-patients was 25. The hospital was founded in 1857 and since that date no less than 71,900 patients have been treated and over 500,000 attendances recorded. The expenditure for the year was £2190. During the year several important structural alterations have been made. The operating theatre has been enlarged and improved, a pathological department has been founded and fitted up, a sitting-room and three bedrooms have been added for the nursing staff, and the electric light and an improved heating apparatus have been introduced throughout the building. The library also has been considerably enlarged. The practice of the hospital and the library are open free of charge to all members of the profession. Patients sent by medical men are admitted without any further recommendation.

ROYAL COLLEGE OF SURGEONS IN IRELAND: ELECTION OF EXAMINERS.—At a meeting of the President, Vice-President, and Council held on May 2nd, the following gentlemen were elected Examiners of the College for one year:—Examiners in Anatomy: Ambrose E. I. Birmingham and Alexander Fraser. Examiners in Surgery: H. Gray Croly and F. Conway Dwyer. Examiners in Physiology and Histology: J. Alfred Scott and Charles Coppinger. Examiner in Biology: John J. Burgess. Examiners in Pathology: Arthur Hamilton White and Edward H. Taylor. Examiner in Midwifery and Gynæcology: Frederick W. Kidd. Examiners in Ophthalmology: Patrick W. Maxwell and Louis Werner. Examiner in Sanitary Law and Vital Statistics: James H. Fergusson. Examiner in Bacteriology: Arthur Hamilton White. Examiner in Engineering and Architecture: J. Charles Wilmot. Examiners in Dental Surgery and Pathology: Arthur W. W. Baker and Daniel Corbett. Examiners in Mechanical Dentistry: Shenstone J. Bishop and George W. Yeates. Examiners in Chemistry and Physics; Robert J. Montgomery and Edwin Lapper. Examiner in Languages: L. J. Woodroffe. Examiner in Mathematics, Physics, Dictation, and English Essay: John Fraser.

PRESENTATIONS TO MEDICAL MEN.—Mr. Herbert Vallance, L.R.C.P. Lond., M.R.C.S. Eng., late assistant medical officer at the infirmary and workhouse, Chelsea, on his resignation has received two presentations subscribed for by the respective staffs, but practically from all the employés, at the infirmary and workhouse. He was for three and a half years at the infirmary and by his geniality and consideration for those about him became very popular. From the infirmary the gift consisted of a valuable set of cutlery and silver rests and that from the workhouse of a metal cake-dish and an electro-plated spirit case with cut-glass bottles. — On April 15th at the St. John's Schools, Abram, Lancashire, Mr. R. T. Clark, L.R.C.P. & S. Edin., L.F.P.S. Glasg., who for upwards of six years has taken charge of that district as assistant to Mr. T. Brayton, L.R.C.P. & S. Edin., on his leaving the district was the recipient of an illuminated address and a purse of gold from the tradespeople and inhabitants of Platt Bridge and district and the members of the ambulance class, and employés of Messrs. Cross, Tetley, and Company, and the Moss Hall Coal Company for services rendered to them for the past seven years.—The members of the ladies' branch of the St. John Ambulance Association at Penzance last week presented Mr. Arthur Reginald Field Evershed, L.R.C.P. Lond., M.R.C.S. Eng., with an embossed copper inkstand mounted on oak as a mark of their appreciation for his services as honorary lecturer to the class.—Mr. T Herbert Goodman, M.R.C.S. Eng., L.S.A., has been presented by the members of the Haverhill classes of the St. John Ambulance Association with a silver salver as a mark of appreciation of his services as honorary lecturer.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The London Water Question.

THE Metropolitan Water Companies Bill, designed to meet emergencies in the water-supply of the metropolis, has now passed all its stages in the House of Commons and is making its way through House of Lords. In the latter Chamber there was a short debate on the second reading of the Bill, in the course of which Lord JAMES of HEREFORD, the Minister in charge, gave the assurance that there is nothing in the Bill which enables any of the companies to tap fresh sources of supply. He gave this assurance in order to allay the apprehension which is said to exist in Hertfordshire that one or more of the companies might buy land in the county, sink wells, and drain the watershed.

Preservatives in Food.

In connexion with the proceedings before the Grand Committee on the Sale of Food and Drugs Bill Mr. HOBHOUSE has drawn up a proposed new clause dealing with preservatives. This clause proposes that where any preservative, except salt, is added to any article of food sold or exposed or consigned for sale within the United Kingdom, the name and amount per pound or per gallon of such preservative shall be declared in legible characters on the vessel, package, or wrapper.

HOUSE OF COMMONS.

THURSDAY, APRIL 27TH.

Poor-law Medical Officers in Scotland.

Sir CHARLES CAMERON asked the Lord Advocate (1) whether the law of Scotland as to the tenure of office by Poor-law medical officers differs from that of England; and (2) whether he would consent to lay upon the table a return showing the instances in which, since the coming into operation of the Local Government (Scotland) Act of 1894, Poor-law medical officers have been dismissed or compelled to resign in consequence of a too conscientious performance of their duties.—The LORD ADVOCATE replied: The reply to the first paragraph of the hon. Member's question is in the affirmative. As regards the second paragraph the Secretary for Scotland considers that it would not be possible to prepare a return in the form proposed by the hon. Member.

The Treatment of Hydrophobia.

Sir WILLIAM WEDDERBURN asked the Secretary of State for India whether between July, 1898, and March, 1899, 33 soldiers had been sent from India to the Pasteur Institute at Paris to be treated for hydrophobia, and, if so, at what cost to the State and with what result; and whether he would obtain the figures showing how many cases of death from hydrophobia had been reported in the Indian army during the last ten years previously to these dates.—Lord GEORGE HAMILTON replied: The reply to the first part of the question is in the affirmative. The payments in this country on this account were about £10 a man and the results have been, so far as I am aware, very satisfactory. I have no information as to the total payments in India. In the ten years from 1888 to 1897 there were 23 deaths of British soldiers in India from hydrophobia.—Sir WILLIAM WEDDERBURN asked the Secretary of State for India whether he was aware that Buisson baths had been established at various centres in India for the sudorific treatment of persons bitten by dogs supposed to be suffering from rabies, and whether a trial had been given to these baths by the Indian medical authorities; if so with what result.—Lord GEORGE HAMILTON replied: I am aware that Buisson baths have been established in India, but the opinions of the Indian medical authorities, so far as they have been received, are not favourable as to the efficiency of this form of treatment of hydrophobia.

Polluted Oysters.

Mr. CHAPLIN said, in reply to a question, that a Bill on this subject had been prepared and would be introduced in the House of Lords.

FRIDAY, APRIL 28TH.

The Inebriates Act.

Mr. HOBHOUSE asked the Home Secretary if he was aware that owing to there being at present no State or certified inebriate reformatory

having accommodation for males the Inebriates Act of last year was almost a dead letter, and what steps he proposed to take, or to recommend the local authorities to take, to enable the Act to be put in force.—Sir MATTHEW WHITE RIDLEY replied: I cannot altogether agree with the suggestion in the first paragraph of the question. At the same time I should be very glad to see local authorities coming forward more readily and assisting the operation of the Act, particularly as regards males, by either establishing reformatories themselves alone or in combination or by promising grants or contributions to private persons or associations who are willing to erect reformatories. As I have already stated I do not at present feel justified in setting up a State reformatory, but I have secured substantial Government contributions for persons committed to certified reformatories. It is to these reformatories that, in any case, the largest number of committals would be made, and it is upon them that the effectiveness of the Act must mainly depend. I may add that I am collecting information from the police authorities throughout the country as to the number of persons within their districts apparently qualified for committal under Section 2 of the Act. When this information is complete I propose in proper cases to draw the special attention of the local authorities to their responsibility in the matter.

MONDAY, MAY 1ST.

The Transport of Sick and Wounded Soldiers.

Dr. FARQUHARSON asked the Under Secretary of State for War whether in view of the fact that upwards of 200 sick and wounded officers and 2500 men are annually brought home as invalids from India and the colonies and that the present method of conveyance by hired troopship service has been unfavourably reported upon in the Army Medical Blue-book for 1897 he would consider whether the War Office can establish a permanent hospital ship for this service.—Mr. POWELL WILLIAMS, on behalf of the Under Secretary, replied: The provision of a hospital ship for conveying sick and wounded from India to this country would rest with the Indian Government, and after full consideration the Secretary of State is not prepared to press the adoption of such a system upon that department. The balance of advantage is not by any means entirely on the side of a hospital ship for the conveyance of invalids as against their more rapid and frequent conveyance on board transports, in the equipment of which great improvements have recently taken place. These considerations apply with special force to our widely scattered colonial garrisons, invalids from which are sent home by packet at the earliest possible opportunity.

The Education Department and a Medical Officer.

Dr. FARQUHARSON asked the Vice-President of the Committee of Council on Education whether, in view of the public health questions which arise in connexion with the attendance of children at the elementary schools, more particularly in reference to the spread of infectious diseases, together with the proper supervision of the centres for defective children, the deaf, and the blind, the health and superannuation of the teachers, &c., it was proposed to appoint a medical officer to the Education Department.—Sir JOHN GORST: The Committee of Council have no present intention of appointing such an officer. The schools for blind and deaf children and for defective children are under the supervision of an inspector who is a qualified medical man. The Department proposes to use for the purposes of the Superannuation Act the local medical officers employed by the General Post Office and the Civil Service Commissioners.

The Use of Fritted Lead.

Sir CHARLES DILKE asked the Home Secretary whether the master potters propose in their reply to the Home Office to make delay in the employment of fritted lead, and what steps he intended to take to induce the manufacturers to carry out the requirements of the lead report.—Sir M. WHITE RIDLEY: The master potters have definitely undertaken to use in future for glazes only fritted lead, but they ask that those of their number who have no experience in fritted glazes may be allowed a reasonable time to master the practical points. This request seems reasonable. As I have already stated I propose to amend the special rules for this trade in order to give effect as far as practicable to the recommendations of the experts.

TUESDAY, MAY 2ND.

Influenza in the House of Commons.

Sir JOHN LENG asked the First Commissioner of Works whether the attention of his department had been directed to the possibility of supplying ozone to the House of Commons when Members are not sitting, and whether in view of the numerous cases of influenza amongst Members and officials during the present session he would consider the advisability of nightly disinfecting the House by the introduction of an element said to be fatal to insanitary microbes.—Mr. PAULTON asked whether the right honourable gentleman would be prepared to establish fumigating chambers for the use of such members as desired them.—Mr. AKERS-DOUGLAS: I have caused the plant necessary for the manufacture and introduction of ozone to be inspected; the methods and practical merits of the process do not appear to me to be as yet sufficiently established. The cost of a complete installation at the Houses of Parliament would be some thousands of pounds and the electrical pressure required for working it is no less than 12,000 volts.—Sir JAMES FERGUSSON asked the right hon. gentleman whether he would consider the expediency of having the windows of the House opened before the House assembled in order that some fresh air might be introduced into the Chamber.—Mr. AKERS-DOUGLAS: I will consider that, but I believe they are so opened. I have been down several mornings to see that they are opened and I have found them opened.

SALE OF FOOD AND DRUGS BILL.

PROCEEDINGS IN THE GRAND COMMITTEE.

THURSDAY, APRIL 27TH.

The Grand Committee of the House of Commons on Trade met to-day, with Mr. JOHN ELLIS in the chair, and resumed the consideration of the Sale of Food and Drugs Bill, beginning with Clause 2, which gives power to the Local Government Board or the Board of Agriculture to sample articles of agricultural produce.

Mr. KEARLEY moved an amendment to provide that "the officer procuring the sample shall divide the same into four parts and shall deal with three of such parts in the manner directed by Section 14 of the Sale of Food and Drugs Act, 1875, as amended by this Act, and shall send the fourth part to the Board."

After a short debate the amendment was accepted by the Government and by the Committee.

Mr. GRANT LAWSON moved to omit sub-section (*b*), which was in the following terms, viz.: "The fee for analysis shall be payable to the analyst by the local authority of the place where the sample is procured." The hon. Member said that under the clause in its present shape a sample could be taken and sent to the analyst without any warning to the local authority, who might not even learn what was the result of the analysis, and in these circumstances he thought it would be very hard to call upon the local authority to pay the cost of the work.

Mr. WALTER LONG said he hoped his hon. friend would not press this amendment, which he felt certain would not contribute to better administration. For one thing, it would create a difference between the policy of this legislation and the existing Acts. It would only be in exceptional cases that the department would exercise this power and he thought that in the interests of good administration the department should possess it. If they called upon the central authority to supervise the action of the local authorities and at the same time they relieved the latter of the cost of the work that properly fell upon them it was not reasonable to suggest that they had strengthened the powers of supervision.

Mr. RENSHAW said that in Scotland he found many of the local authorities opposed to the proposal in the Bill.

Mr. JEFFREYS said he considered that unless this charge, which he regarded as a most legitimate one, were put upon the local authorities the Act would not be enforced.

The SOLICITOR-GENERAL (Sir Robert Finlay) said that popular as the amendment might appear at the first blush it was one the adoption of which would be a great mistake, and further he pointed out that the department would only interfere in cases where the local authorities had failed in their duty.

Mr. KEARLEY opposed the amendment, saying that it was only fair that local authorities should be called upon to pay for work they had neglected.

Mr. HOBHOUSE argued that if the sub-section were passed it would be putting a charge upon the general ratepayers of a community for the benefit of the special interests of agriculture.

Mr. ASCROFT suggested that the Treasury might find the money.

Mr. WALTER LONG, speaking again, insisted that this amendment, if adopted, would strike a fatal blow at the Bill. As the responsible Minister in charge of the Bill he warned the Committee that if they carried the amendment they might just as well adjourn their proceedings and give no further attention to the Bill.

Sir WALTER FOSTER expressed the opinion that the sub-section must be retained, although at the same time he felt certain it would not be popular, but, on the contrary, would cause a good deal of irritation.

Mr. LAMBERT took the view that the sub-section was necessary in order to stimulate local authorities to do their duty.

Mr. GRANT LAWSON proposed as a compromise that the local authority should only be called upon to pay the cost of the analysis if it should appear from the certificate of analysis that an offence against the Sale of Food and Drugs Act had been committed.

Mr. WALTER LONG said that this was not a matter which he was prepared to compromise at all. He had stated with perfect frankness what the view of the Government was as to the effect of the amendment and the issue was a perfectly clear one.

Mr. GRANT LAWSON said his right hon. friend had resisted the amendment very strongly and he was afraid that the Chancellor of the Exchequer would resist it still more when the Bill reached the House and in these circumstances he asked leave to withdraw the amendment.

Leave to withdraw being refused the amendment was put to the Committee and on a division it was negatived by 32 to 8 votes.

Mr. KEARLEY moved to leave out Section 2 which said that the Board may communicate the result of the analysis to the local authority and thereupon there shall be the like duty and power on the part of the local authority to cause proceedings to be taken as if the local authority had caused the analysis to be made and to put in its place a section requiring the Board to take the proceedings.

The Government also resisted this amendment and after a short debate it was by leave withdrawn.

On the motion of Captain DONELAN the section was amended so as to make it compulsory on the Board to communicate the result of the analysis to the local authority.

The Committee then passed to the consideration of Clause 3 giving power to the Board of Agriculture to act in default of the local authority.

On the motion of Mr. GRANT LAWSON words were inserted providing that it shall be the duty of every local authority entrusted with the execution of the laws relating to the sale of food and drugs to appoint a public analyst and to put in force from time to time as occasion may arise the powers with which they are invested, so as to provide proper securities for the sale of food and drugs in a pure and genuine condition, and in particular to direct their officers to take samples for analysis, and on the motion of Sir CHARLES CAMERON further words were inserted providing that any public analyst appointed under the Act shall furnish such proofs of competency as may from time to time be required by regulations which shall be framed by the Local Government Board.

On Clause 4 giving power to the Board of Agriculture to make regulations as to analysis of milk, butter, or cheese,

Sir CHARLES CAMERON moved to give this power to the Local Government Board as well as to the Board of Agriculture.

Mr. WALTER LONG said that the subjects referred to in the clause were purely agricultural subjects in regard to which the Board of Agriculture was more likely to have practical knowledge and experience than the Local Government Board. He presumed, however, that the hon. baronet proposed to extend the clause to other articles of food and that was a proposition to which the Government must offer the most strenuous opposition. The Government had done their best, after infinite trouble and labour to produce a clause which would approximate to the recommendation of the Select Committee that there should be a Committee of Reference to settle these questions. If this committee pushed the matter too far they would not only defeat the ends they had in view but would create fresh risks and dangers. The duty of the Committee of Reference would be to determine as far as they could what deficiency of normal constituents or what addition of extraneous matter should raise a presumption that

milk, butter, or cheese was not genuine. The earlier portion of the measure had been extended to certain other staple articles of food and he would have no objection to a similar extension of this clause, but he should certainly resist this attempt to introduce the Local Government Board.

Mr. KEARLEY expressed the view that the Local Government Board was a more desirable body to carry out the work than the Board of Agriculture.

The amendment was under discussion when the Committee adjourned.

MONDAY, MAY 1ST.

The Committee met again to-day with Mr. JOHN ELLIS in the chair.

Sir CHARLES CAMERON, addressing himself to the amendment which he had moved at the previous sitting, said that his object was to raise the whole question of appointing a Standing Committee of Reference on Food Standards. At the present moment they had practically such a standing committee in Somerset House which was a court of appeal against the public analysts throughout the country and whose standards were well known and recognised. Somerset House had laid down a 2½ per cent. of fat standard for milk. It might be too low, as he thought it was, but Somerset House had good reasons for laying it down, because in the case of many cows the milk did not contain more than that percentage of fat. But in this Bill it was proposed to supersede Somerset House and to appoint a committee named by the Board of Agriculture after consultation with certain experts. What he advocated was an independent standing committee, but failing that he would prefer the existing arrangement to that proposed in this Bill. He had received a letter from Sir Walter Foster in which he said that he entirely approved of the amendment and regretted that he could not be present to support it. Sir Walter Foster said that the Government argument was that the proposed plan was an experiment and that they could not do more than they proposed, but it was an experiment placed in the wrong hands. If such a board of reference as was wanted was to be created it should be at the Local Government Board, and there the experiment could be extended to other matters without any dislocation of machinery.

Mr. WALTER LONG said that as he understood the amendment it was to give a concurrent jurisdiction to the Board of Agriculture and the Local Government Board and to constitute a scientific board of reference independent of any Government department. That meant that the whole structure of the clause would be destroyed. In the paragraph of the report of the Select Committee in which they made their somewhat vague recommendation they were very strongly impressed with the possible risks and dangers which might result from the creation of any such board of reference. It was obvious that if this power were to be placed in the hands of an expert committee whose decisions were to be binding there would be great danger of injury of the most serious kind being done to several of our leading industries. In addition to that it would be an entire change in our present well-recognised system of administration under which there must be a department responsible to Parliament for all which was done. Departments were, of course, compelled to take the advice and opinions of experts on many occasions, but the responsibility for the action taken lay with the department. As to the letter from Sir Walter Foster he would undertake to say that no responsible member of the Local Government Board would be got to support the views expressed in it.

Mr. P. J. POWER said that in dealing with Irish butter it would be necessary to apply quite different standards to those applied to English or Danish butter. In the case of the former it was made to keep and consequently contained a large percentage of water which was necessary to keep the salt in a state of solution. The conditions of the trade must be considered and with this view he hoped that the Board of Agriculture would consult gentlemen engaged in the Irish butter trade.

The amendment was then put to the vote and rejected by a very large majority.

On the motion of Mr. STRACHEY cream was added to the articles to be dealt with and on the motion of Mr. HEYWOOD JOHNSTONE the proportion of water was put down as a matter to be considered. The words "or is injurious to health" were added on the motion of Mr. CHANNING.

Captain DONELAN moved to insert the following words: "For the purposes of this clause the Board of Agriculture shall, before determining standards of purity, consult, together with analysts, representatives of the General Medical Council, the Associated Chambers of Commerce, and trustees of the Cork Butter Market.'

Mr. WALTER LONG asked the hon. Member not to press this amendment and assured him that it was the intention to appoint to this committee not only expert scientific representatives but also people who would represent the consumer and the producer. What the Board of Agriculture would wish to get was not a purely scientific recommendation but a scientific and practical recommendation. He had no doubt that the bodies mentioned in the amendment were very suitable bodies but at the same time it was eminently undesirable that they should in the statute limit in any way the choice of the department. In selecting the committee they would do their utmost to secure a body which would be representative and command public support and confidence.

Mr. P. J. POWER asked whether the committee would be a permanent one.

Mr. WALTER LONG replied that so long as these standards were required this committee would be in existence and he imagined that that would be always. All he asked was that the Board of Agriculture should have a free hand to select the very best and most competent committee.

Mr. JOHN BURNS protested against trade interests being consulted and said that the committee should consist entirely of scientific experts.

Sir JOHN LENG, on the other hand, argued that there were many questions which could only be dealt with by men engaged in the trade.

After some further discussion the amendment was by leave withdrawn.

On the motion of Mr. KEARLEY words were inserted to provide that any regulations made under the Act should be notified in the *London Gazette* and should also be made known in such other manner as the Board of Agriculture might direct.

Mr. HEYWOOD JOHNSTONE moved to insert the following words: "The sale of any sample of whisky containing fusel oil in excess of such percentage as the Board of Agriculture may determine, after such inquiry as they may deem necessary, shall constitute such sale an offence under Section 6 of the Sale of Food and Drugs Act, 1875."

Mr. WALTER LONG said that he had consulted the authorities of the Government Laboratory on this subject and they assured him that there was no necessity whatever for the amendment.

The amendment was at once withdrawn.

In the course of further debate on the clause Mr. WALTER LONG said that the inquiry as to preservatives would cover other matters introduced into food which might be injurious to health.

On Clause 5, extending the Margarine Act of 1887 to margarine cheese, an amendment was moved by Mr. WALTER LONG to provide that "the enclosure of margarine in a wrapper labeled as required by law shall be sufficient notice to the purchaser that the contents are margarine," but after some debate it was withdrawn.

On Clause 6 dealing with the marking of margarine and margarine cheese Mr. WALTER LONG moved to omit the first section and put in its place: "Where under this Act or the Margarine Act, 1887, it is required that any package containing margarine or margarine cheese shall be branded or marked, the brand or mark shall be on the package itself and not solely as a label, ticket, or other things attached thereto." This amendment was adopted by the Committee.

On Clause 7 Mr. HOBHOUSE moved as a new subsection: "Any officer of the Board of Agriculture shall have power to enter at all reasonable times any manufactory of margarine or margarine cheese and to inspect any process of manufacture therein and to take samples for analysis."

The Government resisted this amendment but in spite of their resistance the Committee carried it by 21 votes to 17. Another amendment to increase the maximum penalty for the first offence from £10 to £20 was carried.

The Committee afterwards adjourned.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

AITCHISON, F., M.R., C.M. Edin., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Willington Quay District of the Tynemouth Union.

ALLAN, HERBERT WILLIAM, B.A. Cantab., F.R.C.P. Lond., M.R.C.S. has been appointed Medical Officer to the No. 1 District by the Wells (Somerset) Board of Guardians, vice Richard Purnell, resigned.

ALTMANN, C. A., M.B., Ch.B. Melb., F.R.C.S. Edin., has been appointed acting Public Vaccinator at Bright, Victoria, Australia.

ASHWIN, R. H., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Medical Officer for the Second Market Weighton District of the Pocklington Union.

BALLACHEY, H. H., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Alderley and Gawsworth District of the Macclesfield Union.

BOND, F. T., M.D. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Chipping Sodbury Board of Guardians.

BOWER, GEORGE, L.R.C.P., L.R.C.S., D.P.H., has been appointed Clinical Assistant to the Chelsea Hospital for Women, Fulham-road, S.W.

BOWMAN, A. S., M.B., Ch.M. Edin., has been appointed Government Officer and Vaccinator for New South Wales, also Medical Attendant on the aborigines in that district.

CADGE, W. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Mutford and Lothingland Rural District Council.

CAMERON, JOHN, M.B., Ch.B. Edin., has been appointed House Surgeon to the Central London Ophthalmic Hospital, Gray's Inn-road, W.C.

COLES, R. A., M.B., C.M. Aberd., has been appointed Medical Officer for the Fifth Sanitary District of the Bridge Union.

CORKE, C. A., F.F.P.S. Glasg., L.R.C.P. Edin., has been appointed a District Medical Officer by the Pebworth Rural District Council.

DAVIES, W. J. E., L.R.C.P. Lond., M.R.C.S., has been re-appointed Assistant Medical Officer to the Infirmary, Chelsea, S.W.

DENNIS, G. E., M.B., Ch.B. Melb., has been appointed Resident Surgeon at the Warwick Hospital, Queensland, vice Dr. Lancaster, resigned.

DENYER, STANLEY E., M.A., M.B., B.C. Cantab., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Royal Free Hospital, Gray's Inn-road, W.C.

FOULERTON, A. G. R., F.R.C.S. Eng., D.P.H. Camb., has been appointed Lecturer in Public Health at the Middlesex Hospital Medical School, W.

GREIG, W. C., M.B., Ch.M. Edin., has been appointed a Public Vaccinator for the Birmingham District, New Zealand.

GRIFFITHS, JOHN S., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Bristol Jubilee Convalescent Home.

GUNN, ALBERT A., M.B., Ch.B. Edin., has been appointed Junior House Surgeon of the Blackburn and East Lancashire Infirmary.

HARDY, C. M., M.B., B.S. Durh., has been re-appointed Medical Officer of Health by the Darlington Rural District Council.

HAWLEY, F. H., M.R.C.S., has been appointed Medical Officer for the Caverswall Sanitary District of the Cheadle Union.

HOYLE, FREDERIC, M.B., Ch.B Vict., has been appointed House Surgeon to the Manchester Southern Hospital for Diseases of Women and Children.

JAMESON, A., M.B., Ch.M. Edin., has been appointed Health Officer and Analyst for Cottesloe, West Australia.

KENNY, G. G., M.B., Ch.M. Glasg., has been appointed Resident Medical Officer for the Sanatorium at Rotorua, New Zealand.

LAMB, ROBERT, M.B., C.M. Edin., has been appointed Government Medical Officer and Vaccinator for the district of Molony, New South Wales, vice H. Browne, resigned.

LANDER, F. J., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer to the No. 1 District by the Nottingham Board of Guardians.

MARTIN, JAMES, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Public Vaccinator at Broad Arrow, West Australia.

MARTIN, JAMES S., M.B., C.M. Edin., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Rotherham Hospital.

MATTHEWS, J. F., M.R.C.S., L.S.A., has been appointed a Public Vaccinator at Tallangatta, Victoria, Australia, vice J. S. Thwaites, resigned.

MOLINEUX, JAMES, M.D. St. And., M.R.C.S., has been re-appointed Medical Officer of Health by the Hessle Urban District Council.

MORETON, J. W. E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Tarvin District of the Tarvin Union.

MORGAN, W. L., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Surgeon to the Radcliffe Infirmary, Oxford.

PEARSE, F. W., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer of Health for the Horsley District of the Guildford Union.

PERKINS, H. B., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Barking District of the Romford Union.

ROBINSON, L., M.D., Ch.M. Irel., has been appointed Medical Officer and Health Officer at Gladstone, Queensland, vice C. G. Thorp, resigned.

SIMPSON, D., M.B., Ch.M. Glasg., has been appointed a Public Vaccinator at Ferntree Gully, Victoria, Australia, vice J. Higgins, resigned.

SMITH, E. A. J., L.K.Q.C.P. Irel., L.R.C.S., has been appointed Government Medical Officer and Vaccinator for the district of Grafton, New South Wales, vice C. Hedley, resigned.

STABB, EWEN CARTHEW, F.R.C.S. Eng., has been appointed Surgeon to out-patients at the Great Northern Central Hospital, Holloway-road, N.

WYNTER, W. E., M.D. Lond., B.S., F.R.C.P. Lond., F.R.C.S. Eng., has been appointed Lecturer on Pharmacology and Therapeutics at the Middlesex Hospital Medical School, W.

Vacancies.

For further Information regarding each vacancy reference should be made to the advertisement (see Index).

ADDENBROOKE'S HOSPITAL, Cambridge.—Resident House Surgeon. Salary £65 per annum, with board, lodging, and washing in the hospital.

BARNWOOD HOUSE HOSPITAL FOR THE INSANE, Gloucester.—Junior Assistant Medical Officer. Salary £100 per annum, rising to £120 after the first year, with board, &c.

BERKS COUNTY ASYLUM, Wallingford.—Junior Assistant Medical Officer, unmarried. Salary to commence at £120 per annum, rising £10 yearly to £140, with furnished apartments, board, attendance, and washing.

BETHLEM HOSPITAL.—Two Resident House Physicians for six months. Apartments, complete board and washing provided, and an honorarium at the rate of £12 12s. each per quarter will be paid. Applications to the Treasurer, Bridewell Hospital, New Bridge-street, E.C.

CARLISLE DISPENSARY.—Resident Medical Officer. Salary £130 per annum, with apartments (not board).

COUNTY ASYLUM, Whittingham, Lancashire.—Pathologist. Salary £200 per annum, with apartments, board, washing, and attendance. Also Locum Tenent for four or five months. Two guineas a week.

DUMFRIES AND GALLOWAY ROYAL INFIRMARY, Dumfries.—House Surgeon. Salary £50 per annum, with board and washing.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Medical Officer for the Casualty Department for six months. Salary at the rate of £100 per annum. Luncheon provided at the hospital.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge-road, S.E.—Senior Resident Medical Officer. Salary £70, with board and washing.

GENERAL INFIRMARY AT LEEDS.—House Surgeon for twelve months and House Physician for six months. Board, lodging, and washing provided for both.

GROVE HALL ASYLUM, Bow, London, E.—Junior Assistant Medical Officer. Salary £120 per annum, with board, lodging, and washing.

HOSPITAL FOR WOMEN, Soho-square, London.—House Physician for six months. Salary £30 for that period.

HULL ROYAL INFIRMARY.—Junior Assistant House Surgeon for one year. Salary £40, with board and lodging.

HUNTINGDON COUNTY HOSPITAL, Huntingdon.—House Surgeon. Salary £60 per annum, with board, laundry, &c.

LIVERPOOL STANLEY HOSPITAL.—Honorary Assistant Surgeon.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Assistant Resident Medical Officer for six months. Salary at the rate of £50 per annum, residence in the hospital, with board and washing.

MASON UNIVERSITY COLLEGE, Birmingham (with QUEEN'S FACULTY OF MEDICINE).—Professor of Pathology and Bacteriology.

METROPOLITAN EAR, NOSE, AND THROAT HOSPITAL, Grafton-street, Tottenham Court-road, W.—A vacancy on Honorary Medical Staff.

NEW HOSPITAL FOR WOMEN, 144, Euston-road, London.—Two fully qualified Medical Women as Assistant Anæsthetists for one year. Also two fully qualified Medical Women as House Physician and House Surgeon for six months. Also four Clinical Assistants for Out-patient Department (fully qualified women) for one year.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—Assistant House Surgeon for six months. Board, apartments, and washing provided.

PARISH OF BIRMINGHAM WORKHOUSE INFIRMARY.—Assistant Resident Medical Officer at the Workhouse Infirmary for one year. Salary £100 per annum, with furnished apartments, rations (which do not include alcoholic liquors), coals, gas, laundry, and attendance. Applications to the Clerk to the Guardians, Parish Offices, Edmund-street, Birmingham.

QUEEN'S HOSPITAL, Birmingham.—House Physician for one year. Salary £50, with board, lodging, and washing. Also Obstetric and Ophthalmic House Surgeon for six months. Salary £10, with board, lodging, and washing.

ROTHERHAM HOSPITAL.—Assistant House Surgeon. Salary £60 per annum, with rooms, commons, and washing

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London.—Resident Medical Officer for six months. Salary at the rate of £100 per annum, with furnished apartments, board, and washing.

ROYAL MINERAL WATER HOSPITAL, Bath.—Resident Medical Officer, unmarried. Salary £100 per annum, with board and apartments in the hospital.

ROYAL ORTHOPÆDIC AND SPINAL HOSPITAL, Birmingham.—Honorary Surgeon.

ROYAL ORTHOPÆDIC HOSPITAL, 297, Oxford-street, and 15, Hanover-square, London.—House Surgeon and Registrar for six months. Salary £100 per annum, with partial board and residence.

STAMFORD HILL AND STOKE NEWINGTON DISPENSARY, 189, High-street, Stoke Newington, N.—Junior Resident Medical Officer. Salary £75 per annum, with board and residence.

STOCKPORT INFIRMARY.—Junior Assistant House Surgeon. Salary £2 per mensem, with board, washing, and residence.

ST. PETER'S HOSPITAL FOR STONE, &c., Henrietta-street, Covent Garden, London.—House Surgeon for six months. Salary at the rate of £100 a year, with board, lodging, and washing.

TIVERTON UNION.—Medical Officer and Public Vaccinator for the United Halberton and Sampford Peverell Districts. Salary £50 a year, which includes certain extra fees. Subject to statutory deductions. Applications to the Clerk, Tiverton.

UNIVERSITY OF ST. ANDREWS.—Chair of Pathology. Professor of Pathology.

WEST KENT GENERAL HOSPITAL, Maidstone.—Assistant House Surgeon for six months. Honorarium at the rate of £50 per annum, with board and residence.

WEST RIDING ASYLUM, Wadsley, near Sheffield.—Fifth Assistant Medical Officer. Salary £100 per annum, rising £10 a year up to £150, with board, &c.

Births, Marriages, and Deaths.

BIRTHS.

FLEGG.—On April 22nd, at George-lane, Woodford, Essex, the wife of F. A. Martin Flegg, M.R.C.S., L.R.C.P., L.S.A., prematurely, of a daughter.

HILL.—On April 29th, at Merton-road, Wimbledon, the wife of R. A. Lowder Hill, M.R.C.S., L.R.C.P., of a daughter.

MACLEAN.—On April 30th, at Penrose Lodge, Upper Tooting, the wife of J. N. Maclean, M.B., of a son.

PHILLIPS.—On April 26th, at Vine House, Grantham, the wife of Percy C. Phillips, M.R.C.S., L.R.C.P., of a son.

STEWART.—On April 30th, at Walton House, Lordship-lane, S.E., the wife of H. M. Stewart, M.A., M.D. Cantab., of a son.

VINEY.—On April 30th, at Harcourts, Chertsey, the wife of J. E. Viney, M.B. Camb., L.R.C.P. Lond., M.R.C.S., of a son.

WALKER.—On April 27, at Hill-road, Wimbledon, the wife of George Walker, M.R.C.S., L.R.C.P., of a son, stillborn.

MARRIAGES.

COOPER—STEWART.—On April 26th, at St. Luke's, Southampton, William Frank Cooper, L.R.C.P., L.R.C.S. Edin., of Shirley-road, Southampton, to Janet E. M. Stewart, eldest daughter of Peter Milne Stewart, J.P., of The Lodge, Southampton.

ISAACS—PEASE.—On April 28th, at St. Jude's Church, South Kensington, Edmund Percival Isaacs, L.R.C.P., M.R.C.S., of Kensington, to Jessie Mabel, younger daughter of Colonel Thales Pease, C.B., of Kensington.

LEEDHAM-GREEN—LEES.—On April 12th, at the Wesleyan Church, Somerset-road, Handsworth, by the Rev. Richard Green, Governor of Didsbury College, father of the bridegroom, assisted by the Rev. W. L. Watkinson and the Rev. W. J. Moulton, Charles Albert Leedham-Green, M.D., F.R.C.S., to Edith Lascelles, eldest daughter of John Bayley Lees, Esq., J.P., Oaklands, Handsworth.

LEVICK—CASTLEDINE.—On April 27th, at Kirk Ella, by the Rev. T. E. Lindsay of Middlesbrough and the Rev. J. Foord of Kirk Ella, Harry Driffield Levick, M.B., B.S., F.R.C.S., of 132, St. Paul's-terrace, Middlesbrough, son of Henry Levick of Thrapstone, to Harriett Minnie Castledine, M.B., B.Sc., daughter of the late Henry Castledine of Gloucester-gate, Regent's Park, London, and step-daughter of Dr. Merson, Willerby, Hull.

MACKINTOSH—FALLOWFIELD.—On April 26th, at St. James's Church, Tunbridge Wells, Hugh R. D. Mackintosh, M.D., Onslow-gardens, London, to Aimée E. Fallowfield (née Baroness Von Poellnitz), of Munich.

MEACOCK—WAUD.—On April 27th, at St. James' Church, Westbourne-terrace, by the Rev. William Abbott, Henry Charles Meacock, M.R.C.S., L.R.C.P., to Hilda Daphne Blanche, youngest daughter of Charles Kell Waud of The Lodge, Clapham-road.

DEATHS.

FARRELL.—On April 28th, at Fitzwilliam-place, Dublin, George Elias Farrell, C.B., Deputy-Surgeon-General.

HINNELL.—On April 26th, suddenly, at his residence, Garland-street, Bury St. Edmunds, George John Hinnell, M.R.C.S., L.S.A.

NEDLEY.—On April 25th, at his residence, Cavendish-row, Dublin, Thomas Nedley, M.D. R.I.P.

REYNALDS.—On Wednesday, Feb. 15th, almost suddenly, at Taquah, West Africa, from blackwater fever, George Fredrick Reynalds, M.R.C.S., L.R.C.P., of 4, Normanville, Church-road, Teddington, in his 30th year.

SHAW.—On April 30, at St. Aubyn's, Kew, Archibald Richard Shaw, M.D., at St. Leonards-on-Sea, aged 77 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (8th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (9th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.).

WEDNESDAY (10th).—St. Bartholomew's (1.30 P.M.), University College, (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.).

THURSDAY (11th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.).

FRIDAY (12th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.).

SATURDAY (13th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (8th).—MEDICAL SOCIETY OF LONDON.—8 P.M. General Meeting. Election of Officers and Council for Session 1899-1900. 8.30 P.M. Ordinary Meeting. Papers:—Mr. B. Clarke: Encysted Calculi in the Urinary Bladder, with an account of 20 cases.—Mr. F. Eve: Two Cases of Resection of the Large Intestine, Recovery.

TUESDAY (9th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Papers:—Dr. F. J. Poynton: Rheumatic Pericarditis.—Dr. A. E. Garrod: A Contribution to the Study of Alkaptonuria.

WEDNESDAY (10th).—MEDICAL SOCIETY OF UNIVERSITY COLLEGE (London).—8.30 P.M. Dr. G. V. Poore: Medical London of the Eighteenth Century.

DERMATOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—5.15 P.M. Clinical Demonstration.

THURSDAY (11th).—BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Dr. Snow will show a specimen. Papers: Mr. J. W. Taylor (Birmingham): The Treatment of Gonorrhœal Salpingitis.—Dr. J. Campbell (Belfast): A Case of Pyosalpinx in which one of the Tubes contained 19 ounces of Pus.

BRIXTON MEDICAL SOCIETY.—9 P.M. Paper:—Mr. P. Dunn: On some Points in the Treatment of Iritis.

FRIDAY (12th).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Papers:—Dr. H. White and Mr. G. Bird: Three Additional Cases of Right Colotomy for Chronic Colitis.—Dr. StClair Thomson: Chronic Empyema of the Maxillary Sinus, undoubtedly of two years' and probably of seven years' duration, associated with inveterate Cough and periodical Headache, completely Cured in eight weeks by simple Drainage through the Alveolus.—Mr. M. Hovell and Mr. F. Eve: Cases illustrating the Pathology and Treatment of Chronic Suppuration of the Maxillary Sinus.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (8th).—CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M. Mr. Lennox Browne: Ozœna.

TUESDAY (9th).—WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street, W.).—4 P.M. Dr. T. D. Savill: Chorea and Choreiform Movements.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Beevor: Myopathies.

WEDNESDAY (10th).—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—4.30 P.M. Dr. T. D. Savill: Syphilides. (Post-graduate Course).

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. F. Roberts: The Clinical Investigation of Cases of Chest Disease. (Opening Lecture.).

THURSDAY (11th).—CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M. Dr. D. Grant: Clinical Anatomy and Physiology of the Ear.

LONDON SKIN HOSPITAL (40, Fitzroy-square, W.).—4 P.M. Mr. J. Startin: Interesting Clinical Cases, Analysis of 10,000 Cases.

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL (Hyde-park-corner, S.W.).—3 P.M. Dr. W. H. Dickinson: Fragments of Pathology and Therapeutics. (Baillie Lecture).

CHARING-CROSS HOSPITAL.—4 P.M. Mr. S. Boyd: Demonstration of Surgical Cases. (Post-Graduate Course).

LONDON TEMPERANCE HOSPITAL.—2 P.M. Dr. S. Fenwick: Clinical and Pathological Demonstration to Senior Students.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

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The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied. Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND, LONDON, ENGLAND.

A DILEMMA.

THE General Medical Council is clearly the guardian of the medical profession. The Council may have been created in the interests of the public in order that the public might feel assured that those from whom they sought medical assistance had received due medical training, but this is another way of saying that the Council's duty is to see that medical service is only supplied to the public by persons qualified to supply it. The knowledge of the practitioner is or ought to be maintained by the Council at a proper scientific standard by educational tests while the official list kept by the Council of the persons who have satisfied such tests is or ought to be the safeguard of the public who should understand that if they seek medical assistance from persons not on this roll they do it at their own risk. (For our part we consider the compilation and maintenance of an accurate list of qualified medical men among the most important duties of the Council, a matter to which we shall soon have occasion to refer.) Bearing these facts in mind it will be seen at once that the position which that body of ardent reformers the Corporate and Medical Reform Association, Limited, have just asked the Council to consider in a vigourously worded memorial is a very serious one.

The memorial is somewhat confusedly described as being "On the Subject of 'Improper Conduct' of Registered Practitioners, by Participation in the Issue, to Persons not Medically Registered, of Diplomas or Certificates testifying, or implying, or that may be used to testify or imply, Proficiency in Departments of Medicine, Surgery, or Midwifery." The second clause, which runs as follows, contains its gist:—

> "Certain of your memorialists addressed to your Council, under date of Nov. 23rd, 1898, memorials representing that registered practitioners are taking part in issuing to persons not medically qualified certificates of proficiency in departments of medical practice—namely, to midwives of proficiency to attend so-called 'natural cases'; and to opticians of proficiency to diagnose and treat errors of refraction or conformation of the human eye: representing, further, that such certificates are in violation, and defeat the object, of the Medical Acts, but that your Council, having, by resolutions or proceedings, sanctioned the issue of certain such certificates to midwives no proceedings against registered practitioners for taking part in such certification, either of midwives or opticians, could be expected to succeed whilst your said sanction of certificates to midwives remains on record; and praying your Council to rescind such resolutions or proceedings; and thus to warn all whom it may concern that for medical men to issue, or connive at the issuing of, such certificates to non-registered persons would 'bring them within the scope of your disciplinary powers.'"

From this clause it will be gathered that the Corporate and Medical Reform Association, Limited, directly accuse the General Medical Council of having by resolutions and proceedings allowed the fields of medical practice to be encroached upon, when it is the exact duty of the Council—in the public interest for which it was created rather than in the professional interest which it is always being invited to protect—to see that only such persons practise medicine as are duly qualified by medical education.

In proof of the fact that the issuing of diplomas by the Worshipful Company of Spectacle Makers has led to serious abuses and encroachment by laymen upon the province of medicine, a series of "exhibits" are appended to the memorial, of which the following are specimens:—

(*Advertisements from recent issues of Hull Newspapers.*)

(1) EYESIGHT AND SPECTACLES. CONSULT A. FRANKS (Member of the British Optical Association; Member of the Spectacle Makers' Company, City of London),

SPECTACLE SPECIALIST, 60, Whitefriargate.

No fabulous Charges. Artificial Eyes painlessly fitted. All Examinations, Testing, and Advice Free. Established 100 years.

(2) EYESTRAIN.

Eyestrain is often caused by using Glasses NOT accurately fitted to the Eyes.

Accurately adapted Spectacles can be obtained from J. F. HUNT, F.S.M.C., &c., Eyesight Specialist (by Examination), at the Eyesight Testing Rooms, 49, Savile-street, Hull.

(*Advertisement from "Daily Mail," Dec., 1898.*)

(3) H. LYON, F.S.M.C. (Sight Specialist), Certificated Optician by examination, 89, Queen-street, Cheapside. Mr. LYON'S treatment of defective eyes is entirely successful. Headache, neuralgia, pain in the eye due to eyestrain permanently cured. Eyes examined, sight tested, and all information free of charge.

The gruesome story of an inquest at Walthamstow where the patient died from septic fever under the ministrations of a "lady doctor" named Avenall, the possessor of a diploma of the London Obstetrical Society, is adduced also as an "exhibit" to prove that the public believe the holders of such diplomas to be truly qualified practitioners. We commented upon this case at the time of its occurrence (*vide* THE LANCET, Feb. 18th, 1899).

We regret that we cannot give the space necessary to the publication of the memorial in full, but its purport will be clearly perceived by the clause which we have published. The Association considers that the General Medical Council cannot possibly find members of the medical profession guilty of "infamous conduct in a professional respect" for covering the practice of laymen—i.e., cannot adequately discharge the great duty of purging the Medical Register of offenders—while they sanction the issuing by medical men of documents testifying to the fitness of laymen to practise ophthalmology and obstetric medicine. The dilemma is not, perhaps, quite so real as the memorialists think. It is possible that the fact to which we have already referred that the Medical Acts were, and will be, framed in the interests of the public rather than of the medical profession has not presented itself to their minds with due clearness in all its bearings. However, we do not intend just now to carp in detail at a movement which has its origin in a healthy spirit of determination to maintain the professional status of medical men. The Association invites contributions for the special purposes of the expenses of the memorial to the General Medical Council, and among those who have already subscribed we note the names of Mr. Herbert W. Allingham, Dr. Robert Barnes, Mr. Brailey, Mr. G. A. Critchett, Mr. H. Work Dodd, Mr. F. S. Eve, Mr. W. Adams Frost, Mr. G. Hartridge, Mr. W. H. Jessop, Mr. H. E. Juler, Dr. Macnaughton Jones, Mr. McHardy, Mr. Mansell Moullin, Mr. Ed. Nettleship, Dr. Argyll Robertson, Mr. Sydney Stephenson, and Mr. C. Bell Taylor. Cheques and postal orders should be crossed and sent to Mr. R. B. Anderson, F.R.C.S. Eng. (acting *pro* treasurer), 32, Montague-place, Russell-square, London, W.C.

A QUESTION.

To the Editors of THE LANCET.

SIRS,—Can any of your readers inform me what gown is worn by a Member of the Royal College of Physicians of Edinburgh?

I am, Sirs, yours faithfully,

April 18th, 1899. VIATOR

ADVERTISING METHODS.

To the Editors of THE LANCET.

SIRS,—We have been instructed by the company working the process known as "The Tallerman Treatment" to call your attention to the following circumstances. Your issue of August 29th, 1896, contained a long article on the Tallerman process of local hot-air treatment. Very recently a pamphlet has been issued on behalf of a rival process claiming similar, or somewhat similar, advantages to the Tallerman system, which pamphlet is endorsed and headed "Extracts from the Medical Press," as if such extracts related to the process which the pamphlet advertises, thereby implying that the extracts in question referred to the rival process. One of such extracts is a mutilated version of your article of August 29th, 1896, so that the uninitiated would not unnaturally conclude that your valuable journal had endorsed the process which the pamphlet in question sought to make public. It would occupy too much space to point out the numerous instances in which your article has been altered for the purpose in view, but the mischief which might be caused by such an appropriation is too patent to call for further remark. In justice to the reputation of your journal as well as to the Tallerman process we venture to think some means should be taken to call public attention to what we cannot help describing as the misuse of an original article published by you in the interests of the medical profession and we shall be obliged if you can see your way to deal with the matter in your next issue.

We are, Sirs, yours faithfully,

DAVIDSON AND MORRISS.

Queen Victoria-street, E.C., May 3rd, 1899.

*** We have seen the pamphlet and we cannot commend its disseminators upon their business methods. It contains a mutilated article the original of which was written by Dr. W. Knowsley Sibley in support of the Tallerman treatment. The title of the article is suppressed in the pamphlet and Dr. Sibley's words now wear the appearance of a commendation in THE LANCET of some other treatment. Such tactics will not win the approval of the medical profession or the public.—ED. L.

MEDICAL AID ASSOCIATIONS.

To the Editors of THE LANCET.

SIRS,—As illustrating the methods of these companies I shall give your readers my own experience. About two months ago in a certain provincial town where I had started a cash practice there appeared in a daily paper published there an advertisement as follows, or somewhat like it: "Medical club of £80 with nucleus of practice; no premium; address, &c." I wrote for particulars and the day after an agent of the company called on me and produced an agreement and got me to sign it there and then. I then went to the place, where I found there was no preparation made for me in the shape of rooms or surgery, as the previous medical officer remained in the place in practice, having other similar clubs in hand. I found then cases occurring daily of persons who paid a penny the week before coming for advice and medicine. One case was a scarlet fever case over three miles away and if they paid anything it would be about twopence the whole time I was attending. I complained to the secretary and got no further satisfaction than a letter to say that the matter would have the attention of the district agent, who has two or three counties to look after. No medical examination is allowed, the agents having a free hand to put on any person they choose as a member of the club. As I do not know how many members there are I wanted a

list so that I should know what I was doing and I got the same reply. Some other patients I attended lived three or four miles off in different directions. The private practice is *nil*, because no one would be fool enough to pay the usual fees when they can get put on as members and are entitled to benefit at once on paying 1*d.* per week. It therefore comes to this, that I have to keep myself and provide drugs for an unknown number of possible patients on the magnificent pay of about 30*s.* per week. It would be much better to be a taxameter cabby, who gets, I believe, £3 3*s.* per week. By their precious agreement I am bound for a year, but I do not mean to go on any longer with it than this month, so that I have wasted two months' time, lost the nucleus which I had, and have no work in view. This is the medical profession with a vengeance. In three years I have spent over £350 of my small capital in trying to get a practice and keeping myself. In a short time I shall have nothing and then the end will come. This is after 20 years' work as a fully qualified man. If I was a little younger, or even now if I was in good health, I should leave the country and try the colonies. Will any of your readers say whether the agreement mentioned is legal and binding? I do not think it can be, as there must be some mutual advantage—that is to say, there must be some material advantage—for each party to any agreement to make it legal, and here I am out of pocket and therefore helping to keep a lot of blood-suckers in London or elsewhere (I suppose shareholders) at a loss to myself.

I am, Sirs, yours faithfully,

NOT A CRŒSUS BUT A MEDICUS (UNFORTUNATELY).

April, 1899.

IMPROPER ADVERTISEMENT.

To the Editors of THE LANCET.

SIRS,—Enclosed I send you a card. On leaving the house of one of my patients to-day it was found lying on the doormat. My next visit was next door. There they showed me one which had just been handed in. On leaving the house a lady lodger came in with one in her hand and told us that it had been given to her by a man in the street. I have seen quite a number of them to-day and I have no doubt so have my neighbour practitioners, for they are being placed under every door and put into every shop in this neighbourhood.

I am, Sirs, yours faithfully,

April 27th, 1899. SURGEON.

[ENCLOSURE.]

DR. JENKINS attends at his Surgery, 218, Southampton-street, Morning, 9 to 12; Evening, 6 to 9; at other times he can be seen at his Private House, 311, Southampton-street, and messages can be left there.

THE TITLE OF "DR."

To the Editors of THE LANCET.

SIRS,—I should be much obliged to you for your authority on the following points: (1) Is the assumption of the above title by a registered medical practitioner (on his own doorplate) merely a matter of bad taste and a breach of etiquette; or (2) if brought to the notice of the body from whom his diploma was obtained would they (in the case of any of the British qualifying bodies) cause him to remove the assumed title? I am, Sirs, yours faithfully,

D.P.H. (LOND.).

"*.*" (1) It is certainly bad taste to assume a degree to which there is no right, but (2) we cannot predict what course any particular corporation might take in the matter.—ED. L.

"SUPERFLUOUS HAIR."

To the Editors of THE LANCET.

SIRS,—Your correspondent "M.D." has done me the honour of quoting me. Permit me, therefore, to qualify a little this quotation in its bearing on the case to which he has applied it. The case which he describes is that of a young woman, aged 26 years, who "is developing a moustache of a dark colour" which "is now about one-eighth of an inch long," and he raises the question whether the destruction in detail of the roots of these hairs by the electrolysis needle would conduce on the whole to her benefit. I should be disposed to say that it certainly would not do so. I never employ electrolysis in a case of that kind and always endeavour to persuade the patient not to think of having it done. My reasons are these: In juvenile feminine hirsuteness the hairs on the upper lip are, as a rule, fine—that is to say, silky, are short, and are thickly sprinkled—that is to say, are extremely numerous on a comparatively small area. Each introduction of the electrolysis needle produces always a minute scar. When the hairs are so closely placed together as they are in cases of this kind and are thus operated on, the minute scars overlap one another and thus considerable disfigurement is unavoidable. I have seen many cases where electrolysis has been performed, evidently with due care, for the destruction of the moustache in young women, with a rather deplorable result—that is to say, the production of an uneven, even a bridled, scar occupying the greater part of the upper lip and constituting a noticeable disfigurement of a somewhat forbidding character. It is a question of taste. For my own part I prefer the moustache. But, what is more to the point, I have always found that the patient herself has greatly regretted the event, and would, if she could, exchange the scar for the moustache. It is otherwise with senile feminine hirsuteness. There the hairs of the moustache are long, are coarse, and are spaced much more widely apart. In such cases treatment by the electrolytic needle is suitable and is capable of producing results of a satisfactory kind. But even in cases of this kind the less practice the operator may have had in performing the operation the worse will be the result which awaits him. What then is the best thing for "M.D.'s" patient to do? Something that she will in all probability firmly refuse to do. She ought to shave, and to shave habitually. What is the thing which she is likely to do? She will most probably pull every one of the hairs out over and over again; in this respect following the example of her ancient Roman, her ancient Grecian, nay even her ancient Egyptian sisters. Why will she refuse to shave? Because she thinks that such a course will make the hair grow more thickly, coarser, and longer. Is this so? Not at all. I have satisfied myself by repeated and careful experiment that it is not so. What will be the result of her pulling the hairs out over and over again? It will make them grow much more thickly, much coarser, and very much longer. Can anything then be done to benefit this patient? Nothing. I am, Sirs, yours faithfully,

April 29th, 1899. BALMANNO SQUIRE.

AN APPEAL TO MEDICAL FREEMASONS.

To the Editors of THE LANCET.

SIRS,—Will you permit me to draw the attention of medical masons to the case of Mrs. Dickinson of 1, Bilton-road, Rugby, and to ask their support for this deserving case at the forthcoming election for the Widows of Freemasons in connexion with the Royal Masonic Benevolent Institution? Mrs. Dickinson is nearly helpless and being the only medical candidate on the list should, I think, be supported by the profession. I am, Sirs, yours faithfully,

Woking, May 2nd, 1899. T. CAWLEY EAGER.

"*.*" We are glad to second our correspondent's appeal. Seeing that Mrs. Dickinson is the only "medical candidate" on the list of Widows we certainly hope that medical Freemasons who have votes (not otherwise promised) for the Royal Masonic Benevolent Institution will give her their support. There is also, we believe, one medical candidate amongst the Aged Freemasons seeking election.—ED. L.

RENAL CIRRHOSIS IN FEMALES.

Beta wishes to know what is the relative frequency of renal cirrhosis (granular kidney) in females.

THE WEIR-MITCHELL METHOD.

A CORRESPONDENT writes to ask the addresses of several institutions where a patient could be treated by the Weir-Mitchell process.

R. G. T.—The whole topic is thoroughly well considered in the introductory section of the Medical Directory. We cannot put the matter in a shorter compass.

Arizona.—We have not the least idea how many are published, but some of them, we have reason to believe, have but short lives.

A Reference to the "Norfolk News."—Our correspondent has forgotten to give us his name and address.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 4th, 1899.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
April 28	29·86	S.W.	0·03	83	63	49	52	53	Overcast
,, 29	29·66	S.W.	...	70	61	52	53	56	Overcast
,, 30	29·99	N.E.	0·06	99	54	44	44	50	Cloudy
May 1	30·17	S.W.	...	79	56	44	44	49	Cloudy
,, 2	29·85	N.W.	...	101	63	48	51	55	Cloudy
,, 3	29·99	N.E.	...	96	56	46	45	48	Overcast
,, 4	30·21	N.E.	...	101	53	38	41	45	Fine

During the week marked copies of the following newspapers have been received: *Devon and Exeter Gazette, Manchester Guardian, Truth, South Durham Mercury, Blackburn Times, Bradford Observer, Scotsman, Garston Reporter, St. Helen's Reporter, Bury Guardian, Dundee Advertiser, Eastern Morning News, Birmingham Gazette, Times of India, Pioneer Mail, Architect, Citizen, Builder, Brighton Gazette, Sydney Mail, Science Siftings, Liverpool Daily Post, Daily Graphic, Bristol Mercury, Times, Standard, Yorkshire Post, Sanitary Record, City Press, Leeds Mercury, Pester Lloyd, Hertfordshire Mercury, Reading Mercury, Trowbridge Chronicle, Local Government Chronicle, Mining Journal, Leinster Reporter, Newry Standard, Huddersfield Chronicle, Bedworth Guardian, Dean Forest Guardian, Ulverston Advertiser, Monmouth Beacon, Taunton Echo, North Devon Herald, Croydon Observer, Royal Cornwall Gazette, Kent Herald, Public Opinion, Literary Digest, Surrey Advertiser, Weekly Free Press and Aberdeen Herald, Local Government Journal, Australasian Medical Gazette, Darlington Echo, Dresdner Journal, Leighton Buzzard Reporter, Tonbridge Standard, Oundle Guardian, Rochester Journal, Deal News, Halifax Courier, Swindon Advertiser, Leek Times, Mona's Herald, Public Health, Stratford-upon-Avon Herald, Nuneaton Observer,* &c., &c.

Communications, Letters, &c., have been received from—

A.—Dr. C. Addison, Sheffield; Mr. H. R. Acker, Strasburg; Dr. F. P. Atkinson, Surbiton; Mr. R. B. Anderson, Lond.; Messrs. Allen and Hanburys, Lond.; Mons. J. Astier, Paris; A. J.; Messrs. Armour and Co., Lond.; Association for Pure Calf Lymph, Lond., Secretary of.

B.—Mr. W. H. Burke, Rajkot, India; Messrs. Burroughs, Wellcome, and Co., Lond.; *Birmingham Daily Post*; Mr. E. W. Battle, Warrington; British Medical Association, Secretary of; Mr. J. Paul Bush, Bristol; Mr. Richard Bevan, Lond.

C.—Mr. L. Cataker, Weston-super-Mare; Mr. J. M. Carvell, Lond.; Messrs. Crossley, Moir, and Co., Lond.; County Asylum, Whittingham, Superintendent of; Central London Throat Hospital, Secretary of; Mr. T. J. Croke, Harrogate; Carlisle Dispensary, Hon. Secretary of; Cortland Wagon Co., Lond.; Mr. T. S. Cotterell, Bath; Messrs. Cassell and Co., Lond.; C. E. S.; Dr. L. M. F. Christian, Stockport; Bishop of Chester, Chester; Concorde Concert Co., Lond.; Messrs. Harry Cox, Ltd., Lond.; Dr. W. Colquhoun, Glasgow; Dr. W. B. Cheadle, Lond.; County of Durham Medical Union, Durham, President of.

D.—Mr. H. Downes, Lond.; Dumfries and Galloway Royal Infirmary, Treasurer of; Messrs. Downie, Aiton, and Aiton, Glasgow; Dalrymple Home, Rickmansworth, Medical Superintendent of; Dr. W. Devereux, Tewkesbury; Mrs. Dickinson, Rugby; Durham College of Medicine, Secretary of; Dermatological Society of Great Britain and Ireland, Hon. Secretary of.

E.—Mr. C. Etheridge, Whitstable; Messrs. Eason and Son, Dublin; Mr. T. Eyre, Lond.

F.—Sir J. Fayrer, Lond.; F. S.; Dr. Theodore Fisher, Clifton.

G.—Mr. J. J. Griffiths, Lond.; Great Eastern Railway Co., Lond., Continental Traffic Manager of; Messrs. Grindlay and Co., Lond.; Dr. E. Goodall, Carmarthen; Dr. J. F. Gemmel, Lancaster; Mr. J. F. Gradon, Oxford; Mr. H. Gutch, Winchester; Mr. G. Gordon, Lond.

H.—Mr. A. Braxton Hicks, Lond.; Mr. E. W. Hill, Manchester; Mr. F. S. Hogg, Lond.; Dr. S. H. Habershon, Lond.; Hull Royal Infirmary, Secretary of.

J.—Mr. George Johnston, Lond.; J. H. D.; J. B. B.; Messrs. W. and A. K. Johnston, Edinburgh.

K.—Mr. B. Kühn, Lond.; Mr. D. T. Key, Wyke Regis; Mr. H. Kirby, Crosshills; Messrs. King, Malcom and Co., Lond.

L.—Dr. R. Liveing, Lond.; Mrs. W. Leng, Sheffield; Liverpool Stanley Hospital, Secretary of; Messrs. Lamb and Watt, Liverpool; Mr. C. J. Lownds, Lond.; Messrs. Lucius and Brüning, Lond.; Leeds General Infirmary, Manager of; Mr. Sydney Langdon, Seville; Mr. H. K. Lewis, Lond.; Mr. Hugo Lorenz, Lond.

M.—Mr. D. H. Meiring, Riddersburg, Orange Free State; M.D., Wimbledon; Messrs. C. Mitchell and Co., Lond.; Mr. J. H. Montague, Lond.; Dr. C. F. Marshall, Lond.; Mr. W. Milne, Kimberley, South Africa; Dr. C. W. Marriott, Reading; Mr. F. C. Madden, Cairo, Egypt.

N.—North Staffs Infirmary, Stoke-upon-Trent, Secretary of

O.—Mr. W. S. Owell, Lond.; Oxine, Ltd., Lond.; Mr. G. Oliver, Bocking.

P.—Dr. G. H. Parry, Ventnor; Mr. Y. J. Pentland, Edinburgh; Mr. H. J. Pulling, Lond.; Major F. F. Perry, Lahore; Plumbers, Worshipful Company of, Lond.; Messrs. Potter and Sacker, Lond.; Messrs. Parke, Davis, and Co., Lond.; P. J. F. K.

Q.—Queen's Hospital, Birmingham.

R.—Mr. E. J. Reid, Lond.; Russell Syndicate, Glasgow; Retman Publishing Co., Lond.; Royal Orthopædic Hospital, Birmingham, Secretary of; Royal Mineral Water, Bath, Registrar of; Miss E. Rouse, Lond.; Royal Society, Assistant Secretary of; Mr. W. Russell, Lond.; Dr. Forbes Ross, Lond.; Messrs. Reynolds and Branson, Leeds.

S.—Mr. E. Smyth, Portaferry; Messrs. W. H. Smith and Son, Manchester; Dr. G. Stanton, Simcoe, Canada; Messrs. Street and Co., Lond.; Messrs. Shelley and Co., Lond.; Stockport Infirmary, Secretary of; Dr. A. Stewart, Manchester; Mr. J. Spring, Grimsby; Dr. E. Mansel Sympson, Lincoln; Mr. George Stoker, Lond.; Mr. W. C. F. Smith, Halifax; St. Peter's Hospital for Stone, &c., Secretary of; Messrs. J. P. Segg and Co., Lond.

T.—Captain R. G. Turner, Bombay; T. D.; Tiverton Union, Clerk of; T. J. D.; Dr. J. Roberts Thomson, Bournemouth; Dr. St Clair Thomson, Lond.; Mr. L. Tallerman, Lond.

V.—Vineyard Basket Wine Co., Lond.; Victoria Carriage Works, Lond.; Verax, Morriston.

W.—Mr. C. Williams, Liverpool; Mr. C. H. Whiteford, Plymouth; W. W. H. H.; Messrs. J. Wright and Co., Bristol; Wills, Ltd., Lond.; Messrs. W. and F. Walker, Liverpool; Messrs. Waltham Bros., Lond.; Miss Woodhouse, Margate; West Kent General Hospital, Maidstone, Secretary of; West Riding Asylum, Wadsley, Secretary of; Dr. J. R. Woodcock, Holcombe; Dr. F. J. Waldo, Lond.

Y.—Dr. Meredith Young, Crewe.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. H. Astley, Portobello; A. H. L.; A. W., Bradford; A. C.; Aberystwith Corporation; Mr. Alexander, Newcastle-on-Tyne; A. H.

B.—Dr. B. S. Breyfogle, San Francisco; Blackburn Infirmary, Secretary of; *Birmingham Daily Gazette*; Mr. H. H. Bate, Biddenden; Dr. G. G. Bothwell, Bideford; Messrs. J. Beal and Son, Brighton; Mr. J. H. Booth, Chesterfield; Mr. S. H. Burton, Norwich; Messrs. Benson and Co., Lond.; Mr. S. H. Benson, Lond.; Dr. R. Birt, Wakefield; Barking road (475), Plaistow; Major R. W. Barnes, Falmouth; Borough Hospital, Birkenhead, Treasurer of; Bayer Co., Lond.

C.—Mr. J. Carter, Lond.; Dr. L. Cane, Peterborough; Messrs. T. D. Charlesworth and Co., Lond.; C. J.; Messrs. Condy and Mitchell, Lond.; Cumberland Infirmary, Carlisle, Secretary of; Mr. L. N. Choudhuri, Balaghat, India; C. G. D.; Mr. L. P. Chalia, Dibrugarh, India; Mr. J. B. Cameron, Lond.; Chelsea Hospital for Women, Secretary of; Messrs. Cohen and Co., Lond.; Signor Castoldi, Brescia.

D.—Dr. T. B. Dunn, Lond.; Miss Duncan, Dublin; Messrs. Duncan and Flockhart, Edinburgh; D., Leicester; Digitalia, Kettering; D. F. G.; D. E. T.; Dr. D. Davies-Jones, Mountain Ash; D. J.H.; Dr. S. Delépine, Manchester; Mr. T. Dixon, Lond.; D. M. G.; Derby County Asylum, Mickleover, Clerk of.

E.—Mr. D. Evans, Cardiff; Mr. F. G. Ernst, Lond.; Exeter City Asylum, Treasurer of; E. A. B.; E. M. S.; E. H.; E. H. M.; E. W. H.

F.—Dr. G. C. H. Fulton, Eston; Rev. W. Farrer, Lond.; Fisherton Asylum, Salisbury, Medical Superintendent of.

G.—Mr. A. J. Greene, Liverpool; G. H. P.; Messrs. R. W. Greeff and Co., Lond.; Messrs. Gilyard Bros., Bradford; Mr. H. Green, Teddington; General Apothecaries' Co., Lond.

H.—Mr. R. Hedden, Crawley; Dr. R. E. Howell, Middlesbrough; Messrs. Hooper and Co., Lond.; H. D.; Hereford General Infirmary, Secretary of; H. S. W.; Messrs. J. Haddon and Co., Lond.; H. K.; Heigham Hall, Norwich, Proprietor of; Mr. J. T. Hartill, Willenhall; Messrs. Hodder and Stoughton, Lond.

I.—Messrs. Ingram and Royle, Lond.

J.—Mr. D. J. Jones, Blaenavon; J. H. S.; J. C.; J. B.; J. C. R. H.; J. H. H.; J. J.; J. T. B.

K.—Dr. A. E. Kelsey, Gosport; Mr. P. Kavanagh, Framlingham; Mr. C. C. Kemp, Nottingham; Mr. M. A. Kirton, Stoke; Messrs. Keith and Co., Edinburgh.

L.—Messrs. Lee and Nightingale, Liverpool; London College of Pharmacy, Secretary of; Locum Tenens, Leicester; Launceston (Tasmania) Hospital, Secretary of; Leeds Union, Clerk of; L. N. E.

M.—Mr. J. R. McKinlay, Lond.; Medical Graduates' College, Lond.; Manchester Royal Infirmary, Secretary of; Dr. C. Macmaster, Perth; Dr. J. F. D. Macara, Durness; Maltine Manufacturing Co., Lond.; Mrs. L. Muir, Frimley; Dr. M.; Dr. C. Martin, Egbaston; Mr. W. A. Mushé, Lond.; M. J. B.; M.R.C.S., London; Dr. C. McRitchie, Huntingdon; Medicus, Manchester.

N.—Messrs. Newbery and Son, Lond.; Northern Medical Association, Glasgow.

O.—Mr. F. W. Ord, Castle Gresley; *Oxford Chronicle*; O. S. W.; Mr. J. E. Owens, Llandudno.

P.—Mr. J. Pond, Norwich; Parish of Paddington, Clerk of; Mr. P. C. Phillips, Grantham; Mr. F. Piggott, Cambridge; Messrs. Partridge and Co., King's Lynn; Mr. R. Parker, Liverpool; P. T.; Dr. E. J. Parry, Pontycymmer; Messrs. Proctor, Son, and Clague, Newcastle on-Tyne.

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